

The United States MILLER

Published by
E. HARRISON CAWKER. { Vol. 18, No. 6. }

MILWAUKEE, APRIL, 1885.

Terms: \$1.00 a Year in Advance.
Single Copies, 10 Cents.

RICHMOND MANUFACTURING CO., LOCKPORT, N. Y.,

MANUFACTURERS OF RICHMOND'S CELEBRATED

Warehouse Receiving Separator, Grain Separator
AND OAT EXTRACTOR

WHEAT SCOURERS,

—AND—

Wheat Brush Machines,

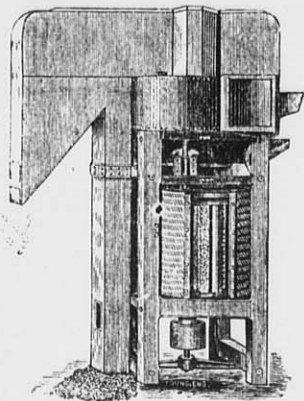
UPRIGHT AND HORIZONTAL BRAN DUSTERS,

CENTRIFUGAL FLOUR DRESSING MACHINES.

Thousands of these Machines are in successful operation,
both in this country and in Europe. Correspondence solicited.

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Adjustable Brush Smut Machine.

READ THIS!

WE HAVE THE BEST

Re-Grinding and Corrugating Machines

IN THE COUNTRY.

Millers say they would rather pay us **TEN DOLLARS**
per Roller than to have done elsewhere
FOR NOTHING. TRY US.

THE FILER & STOWELL CO., Limited,

CREAM CITY IRON WORKS,

Milwaukee, Wisconsin.

SUCCESSFUL FROM THE START

Office of MOUNT HOPE MILLS AND McLEANS STEAM ELEVATOR.

McLean, Ill., Dec. 13th, 1884.

MESSRS. EDW. P. ALLIS & CO., Milwaukee, Wis.

DEAR SIR:—I cheerfully accept the New Roller Mill that you have built
in the place where the old buhrs and other machinery were taken out, and
must say that it is fully up to my expectations in every respect, in workman-
ship and quality of flour produced.

Respectfully Yours,

C. C. ALDRICH.

ODELL'S ROLLER MILL SYSTEM

Is now in successful operation in a large number of mills, both large and small, on hard and soft wheat, and is meeting with Unparalleled Success. All the mills now running
on this system are doing very fine and close work, and we are in receipt of the most flattering letters from millers. References and letters of introduction
to parties using the Odell Rolls and System, will be furnished on application to all who desire to investigate.

ODELL'S ROLLER MILL,

Invented and Patented by U. H. ODELL, the builder of several of the largest and
best Gradual Reduction Flour Mills in the country.

AN ESTABLISHED SUCCESS.

WE INVITE PARTICULAR ATTENTION TO THE FOLLOWING

POINTS OF SUPERIORITY

possessed by the Odell Roller Mill over all competitors, all of which are broadly covered by
patents, and cannot be used on any other machine.

1. It is driven entirely with belts, which are so arranged as to be equivalent to giving each
of the four rolls a separate driving-belt from the power shaft, thus obtaining a *positive*
differential motion which cannot be had with short belts.

2. It is the only Roller Mill in market which *can instantly be stopped without*
throwing off the driving-belt, or that has adequate tightener devices for taking up the
stretch of the driving-belts.

3. It is the only Roller Mill in which *one movement of a hand-lever spreads the*
rolls apart and shuts off the feed at the same time. The reverse movement of this
lever brings the rolls back again exactly into working position and *at the same time*
turns on the feed.

4. It is the only Roller Mill in which the movable roll-bearings may be adjusted to and
from the stationary roll-bearings *without disturbing the tension-spring*.

5. Our Corrugation is a decided advance over all others. It produces a more even granu-
lation, *more middlings of uniform shape and size, and cleans the bran better*.

We use none but the BEST ANSONIA ROLLS.

OUR CORRUGATION DIFFERS FROM ALL OTHERS, AND PRODUCES

BEST BREAK FLOUR and MIDDINGS of BETTER QUALITY.

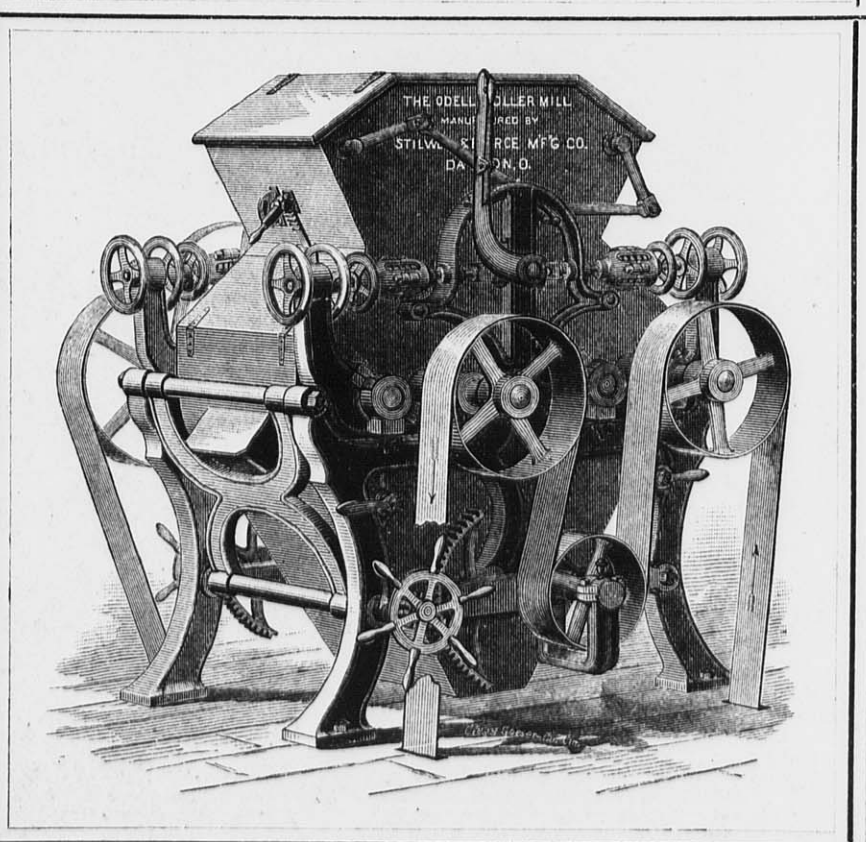
Mill owners adopting our Roller Mills will have the benefit of Mr. Odell's advice, and long experience in arranging mills. Can furnish machines on Short Notice. For further
information, apply in person or by letter to the sole manufacturers,

STILWELL & BIERCE MANUFACTURING CO.,

Agents for Du Four's Bolting Cloth.

[Please mention this paper when you write to us.]

DAYTON, OHIO, U. S. A.



CONCLUSIVE PROOF

OF THE SUPERIORITY OF THE

GRAY NOISELESS ROLLER MILL

Is furnished by the fact that these celebrated machines will be used by Messrs. C. A. PILLSBURY & Co., in their new

PILLSBURY "B" MILL

All bidders for the work of constructing this immense mill being required to figure on using the Gray Roller Mills. The selection of these machines for the new "B" mill was the result of several years practical test in the other mills owned by the same firm in competition with various other roller mills, the decision being unanimous, that, in all particulars, for practical work in the mill, Gray's Noiseless Roller Mills were superior to all others.

We wish to assure our customers who may not wish to build 2000 barrel mills, but who wish to build mills of smaller capacity, that no matter what size mill they desire to build, or how small its capacity, the **GRAY ROLLER MILLS** are the best they can use, and we shall at all times furnish machines equal in every respect of material and workmanship to those which will be used in the new Pillsbury Mill.

EDW. P. ALLIS & CO.,

RELIANCE WORKS,

MILWAUKEE, WIS.

Sole Manufacturers of Gray's Patent Noiseless Roller Mills, adapted to mills of any desired capacity.

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THE BUCKET SHOPS.

The fight between the Board of Trade and the bucket-shops, which has been in progress for a year or two, still continues with unabated fury, numerous suits being still pending in the courts to settle the differences between them. In this fight the board of trade is the aggressor, and the war is waged with the avowed object of utterly depriving the bucket-shops of existence. The plan proposed to accomplish this is to withhold from the bucket-shops the market quotations of the board, without which, it is said, they could not live a day. The reason given for making this fight is that the bucket-shops are a nuisance to the community. It is alleged that, while these concerns represent themselves to be marts of trade, they are in reality merely gambling halls, where the idle, the lazy and the avaricious may indulge their favorite vice without having attached to them the stigma of law-breakers or being branded as criminals. While it is admitted that the implements of the game which is played in these places are similar to those wielded by legitimate commerce, it is asserted that the fact only renders them the more alluring and deceptive, and therefore the more pestiferous and dangerous. It is claimed that in these places many a fortune has been lost and many a character wrecked; that in them many a young man has met his first temptation to rob his employer's till, to lose his self-respect, and have first occasion to behold himself a thief and a criminal.

The ordinary bucket-shop is a place where men can deal in grain and provisions in less quantities than are dealt in on the regular board of trade. The commission is usually one-eighth of one per cent. for grain, instead of one-quarter of one per cent., which is the charge on the regular board. The quotations are derived from the regular board by telegraph wire, and are posted on a blackboard in public view. When anyone wishes to make a purchase he consults this board as to the latest price of the article in which he wishes to deal, and then fills out a contract form provided by the proprietor of the shop, and which in effect certifies that he has purchased a given quantity of the article in question at the price named, and to this he attaches his signature. This contract he hands to the cashier of the shop, together with the regular margin, which is one cent per bushel on grain and twenty-five cents a barrel on pork. The purchase is then consummated and holds good until the market declines enough to exhaust the margin put up, in which case a call is made on the purchaser for more margins, and, in case he declines or neglects to meet this demand forthwith, the deal is at once closed and the purchaser is a loser by the amount he has put up in the first instance as a margin. If, however, the market advances or stands stationary and the purchaser desires to have the transaction closed, he fills out another contract form in the same manner as when making his purchase, which certifies that he thereby sells the article mentioned at the price named to close out a deal. Should the market have risen, he is then entitled to receive from the proprietor of the shop where he has made his deal the difference between the price at which he purchased and the quotation at which he sold it, less the commission already mentioned, which the proprietor charges for making the deal. Should the market have remained stationary from the time the purchase is made till the deal is closed, the commission is deducted from the margin put up, and the balance remaining turned over to the purchaser; or should it have declined a little, but not enough to exhaust the margin, the commission and amount of the decline are deducted, and the balance turned over. In the bucket-shops purchases and sales are not made with a view to make and take delivery of the articles bought and sold. They are simply a bet that the markets will advance or fall as the case may be, and in this view of the case the business transacted there is betting pure

and simple. It is, nevertheless, claimed by the proprietors of these places that their business is in principle identical with that of the regular board of trade. This is true to a certain extent. The purely speculative trades on the board of trade—and it cannot be denied that there are a very large number of these trades effected daily—are in nature and principle identical with those of the bucket-shops. But, on the other hand, it must be remembered that a large amount of the business transacted on the floor of the regular board is legitimate, bona fide trading, engaged in with no other intention than that of making and taking delivery of the commodity dealt in. The members of the board of trade have always within their reach facilities for this legitimate exchange of the articles of commerce dealt in. The bucket-shops have not, and do not pretend to have any such facilities.

Another difference in the business of the two places, though it hardly reaches to the principle of the thing, is that every operator in a bucket shop must deal directly with the proprietor of the concern. All purchases are made from him, and all sales are made to him. The frequenters do not deal with one another as on the regular board. To the casual observer the ordinary bucket-shop presents a very tame appearance as compared with that of the regular or open boards of trade. It is simply a large room filled with chairs, which are occupied by the frequenters, who sit quietly there watching the figures which are continually being posted on the large blackboard in front of them, and which represent the quotations of the regular board. A dead stillness usually prevails. There is no loud talking, no shouting, no frantic gesticulation, as on the regular board; and when anyone wishes to make a purchase, he simply rises, goes to the cashier's window, fills out his blank contract, and hands it to the cashier, with the margin, as already described.

In the bucket-shops, the lowest deal taken is for five hundred bushels of grain and twenty barrels of pork. The proprietors of these shops exercise their own discretion about taking a deal or closing it out. That is, some of them will not close a deal promptly, when asked to do so, unless they feel so disposed, but will make the purchaser wait for further quotations. In one bucket-shop on the board of trade alley, there is a curious instrument known as a clock ticker. It is a large square frame, surmounted by what looks like an ordinary clock. In the frame beneath the clock there are two slits, one beneath the other. At the expiration of every fifteen seconds, by a movement of hidden machinery, some cards appear to view on one or the other of these slits, and on these cards are written the names of a commodity such as wheat, corn, pork or lard, and underneath the word there is a fraction— $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$, etc. Should the card appear in the upper slit, it raises the market by the fraction shown. If it appears on the lower slit, it causes it to fall to the extent indicated by the fraction. These cards behind the frame are of course arranged by the proprietors of the shop, and it is supposed that the machine is so constructed that these proprietors can make the cards go into the slit as they desire. It is true the cards are put into long boxes and exposed to public view before they are put into the machine, and in order to give an appearance of fairness to the whole business, someone among the customers is invited up to shuffle the cards, but of course the one who accepts the invitation can only disarrange a certain quantity of the whole lot; and enough of the original pack will remain to make the lot come out on the side of the proprietors, so that, in the long run, the game is invariably a losing one for those who patronize the institution. This clock fixes the prices of articles dealt in according to its own methods. Sometimes these prices agree with the real prices, and sometimes they do not. At every movement of the cards there is a raise in some com-

modity, and a fall in another. Quite a large crowd of people gather in this shop from day to day and experiment with this machine, and keep it up until they lose enough money to satisfy their curiosity. No one was ever known to come out a winner in the long run. Of course the principle of the business is nothing more nor less than pure gambling, and should be so considered by the authorities. These bucket-shops possess a great fascination for a class of young men who happen to have a little money and dislike to work, and they congregate in there in large numbers from day to day, and smoke and make deals as they may take a fancy. Of course it is only a question of time when their money gives out and they are obliged to go to work again. Hundreds and hundreds of cases have been known in this city, where men have followed this fascination until they have lost everything they had, and seem utterly unable to break away from the power which this form of gambling exercises over them. Many thousands of cases might be quoted as illustrations of the truth of the above, but one or two examples will suffice. Sometime ago a well-to-do grocer on the West Side became infatuated with the idea that by speculating he could earn money easier than he could in his store. Accordingly he went into a bucket-shop and began to operate. When he started he had several thousand dollars, and his wife had as much more. Of course he neglected his legitimate business more and more from day to day, and became more and more absorbed in his speculation. Sometimes he won and sometimes he lost, and the latter was the more frequent occurrence, and in the course of a year or two his store had gone, his money had gone, and his wife's money had followed both. The family was nearly broken up, and to-day that man may be seen still hovering around these places, a mere wreck of his former self.

Another case was that of a young man on the West Side who was keeping a little bakery and confectionery shop. He had saved up money in former years, and thought he could get a living easier than by minding his store, and so he went to the bucket-shop and commenced to operate. At first he was much pleased with the new occupation, and was fortunate in several deals. By and by his luck turned, and the deals began to go against him; as usual in such cases, he lost his mental balance, and became involved in deals to such an extent that he could not see his way out. In the course of a few days, however, a drop in the market closed his deals for him with a heavy loss. When reflecting upon his course a few days subsequently, he made this remark: "It seems a very easy thing for a man to go into these shops and make \$5 and \$10 a day in one deal and then come out, but the experience of the world is that very few are able to do it. My own experience is that I am one of the majority." Thereupon he turned his back upon the whole business, a sadder and wiser, if not richer man.

Still another case was that of a young man who came from the interior part of the State, as soon as he came into the possession of a small patrimony, to push his fortune in this great city. He was a telegraph operator by occupation, and on arriving here obtained a situation as operator in one of these bucket shops. Very soon he caught the infection of the fever of speculation with which the atmosphere around him was laden, and he began to make ventures in the whirlpool of speculation, and in an equally short time all he had in the world disappeared in the vortex. He was observing, however, and plucky as he was observing. His experience had taught him that, while the lambs that frequented the bucket shops invariably got shorn of the last fiber of wool on their backs, the shepherds who owned the fold just as surely lined their huts with the wool, and accordingly he determined to start out afresh as one of these. To enable him to do so he borrowed a little money and then opened his shop. Good luck attended him from the start, and in three months'

time he was worth \$25,000 in hard cash. He then resolved to stop and give up the whole business and succeeded in selling out his shop to advantage. The habit he had acquired, however, was too strong for him, and strive as he might, he could not withstand its fascination, and to-day he is still to be found in the pit dealing in margins and puts and calls, and such like vapory articles of commerce. His end is not yet; but reasoning by analogy, it does not take either a prophet or the son of a prophet to predict what the inevitable end will be.

It is true there are some persons who are fortunate in their ventures, and who come out ahead in the game. Some of them know enough to keep the money after they have won it, and go about their business, but these cases are very rare. The almost inviolable experience of the speculator is that if he has made some money by dealing he becomes more anxious to make a second deal, and if he should happen to win twice or three times in succession, he is almost sure to become entangled in a very short time, and lose all that he has gained. A person may commence dealing, and be almost invariably successful for quite a length of time, and then, all of a sudden his luck will turn, and he will commence to lose, and after losing several deals he grows desperate and begins, as in betting, to make his stakes larger, as any gambler would under the circumstances, and the subsequent loss is great in proportion. It has already been said that the board of trade has made a determined effort to deprive these bucket-shops of their quotations, but in spite of every precaution they have thus far succeeded in securing them. The prospect, however is that in the course of time the board of trade will succeed in depriving them altogether of these quotations, and thus break up an unmitigated evil for the whole community. — *Chicago Journal.*

THE NEW "REFORM" PURIFIER.

In the last number of *Die Muehle*, published at Leipzig, Mr. Kunis gives a brief description of this new purifier, which is an improvement on the purifier patented some years ago by Seck, of Dresden. Mr. Kunis saw one of the new machines at work, and thus describes it: There is a piece of flannel which runs on four rollers over the top of the sieve, which is covered with silk as fine as No. 11. The silk is kept clean by a brush. The air is exhausted through the flannel first and then through the silk. This current of air sends the light particles up, but before they reach the flannel above the sieve, they pass through little channels which make the air travel faster. As soon as the dust has passed the little channels, the heavier particles of this fluffy stuff settle down into the channels which are fixed on the top of sieve frame. Through shaking, they run down the channels (which slope a little) and collect in a worm. The very lightest particles go right up and stick to the flannel. The flannel, which, as I said before, runs over four rollers, gets cleaned on one side through the shaking arrangement, and the very light stuff is collected by itself. There is no stove room required for working this machine, and as the draught has to pass through the flannel before it gets to the silk, it spreads evenly all over the surface of the sieve. The principal advantage of this machine is that nothing is lost. Even the offals, which generally settle in a dust room in a heap, are divided in inferior and better classes, and the air which passes away from the machine is perfectly clear and free from dust. The machine cleans about eight hundred weight of middlings per hour.

A NEW PORCELAIN.—A new porcelain, far superior to the famous old Sevres, and identical with that of China, lending itself to artistic decoration and taking all kinds of glazes, has been produced after ten years' experiment, by M. Lauth, of Sevres.

UNITED STATES MILLER.

PUBLISHED MONTHLY.

OFFICE NO. 124 GRAND AVENUE, MILWAUKEE.
Subscription Price\$1 per year in advance.
Foreign Subscription\$1.50 per year in advance.

MILWAUKEE, APRIL, 1885.

ANNOUNCEMENT:

WM. DUNHAM, Editor of "The Miller," 69 Mark Lane, and HENRY F. GILLIG & Co., 449 Strand, London, England, are authorized to receive subscriptions for the UNITED STATES MILLER.

We send out monthly a large number of sample copies of the UNITED STATES MILLER to millers who are not subscribers. We wish them to consider the receipt of a sample copy as a cordial invitation to them to become regular subscribers. Send us One Dollar in money or stamps, and we will send THE UNITED STATES MILLER to you for one year.

The United States Consuls in various parts of the world who receive this paper, will please oblige the publishers and manufacturers advertising therein, by placing it in their offices, where it can be seen by those parties seeking such information as it may contain. We shall be highly gratified to receive communications for publication from Consuls or Consular Agents everywhere, and we believe that such letters will be read with interest, and will be highly appreciated.

TO ADVERTISERS.

Milwaukee, Wis., April 1, 1885.

To Those Interested in the Flouring Trade:

THE UNITED STATES MILLER is now in its ninth year, and is a thoroughly established and much valued trade paper. It has a large regular list of domestic and foreign subscribers. It is sent monthly to United States Consuls in foreign countries, to be filed in their offices for inspection by visitors. It is on file with the Secretaries of American and European Boards of Trade for inspection of members. Aside from the above, thousands of SAMPLE COPIES are sent out every month to flour mill owners who are not subscribers, for the purpose of inducing them to become regular subscribers, and for the benefit of those advertising in our columns. Every copy is mailed in a separate wrapper. Our editions have not been at any time since January, 1882, less than 5,000 COPIES each, and are frequently in excess of that (see affidavit below). We honestly believe that the advertising columns of the UNITED STATES MILLER will bring you greater returns in proportion to the amount of money invested than any other milling paper published. Advertisers that have tried our paper for even a few months have invariably expressed themselves well satisfied with the results. Our advertising rates are reasonable. Send for estimates, stating space needed. The subscription price of the paper with premium is One Dollar per year. Sample copy sent free when requested. We respectfully invite you to favor us with your patronage. We shall be pleased to receive copies of your catalogues, and also trades items for publication free of charge. Trusting that we may soon be favored with your orders, we are,

Yours truly,

UNITED STATES MILLER.
E. HARRISON CAWKER, Publisher.

"MILL FOR SALE" ads. inserted once for \$2.00, or three times for \$5.00, cash with order.

"SITUATION WANTED" ads. 50 cents each insertion, cash with order.

STATE OF WISCONSIN, ss.

MILWAUKEE COUNTY, ss.
E. HARRISON CAWKER, editor and publisher of the United States Miller, a paper published in the interest of the FLOURING INDUSTRY, at No. 124 Grand Avenue, in the City of Milwaukee, and State of Wisconsin, being duly sworn, deposes and says that the circulation of said paper has at no time since January, 1882, been less than FIVE THOUSAND (5,000) copies per month; further, that it is his intention that it shall not in the future be less than FIVE THOUSAND copies each and every month; further, that he has paid for regular newspaper postage at the rate of two (2) cents per pound on domestic and Canadian newspaper mail for the years 1883 and 1884 the sum of \$423.74, showing an average of \$17.65 per month for 24 months; the average weight of domestic and Canadian mail being 88 1/2 pounds per month and the total number of pounds of such newspaper mail sent out during the 24 months ending with December, 1884, being 21,180 pounds. Six copies of the U. S. Miller weigh about one pound. The above postage does not include postage paid on local or foreign papers, Canada excepted.

E. HARRISON CAWKER.
Subscribed and sworn to before me this 7th day of January, A. D. 1885.

G. MCWHORTER.
Justice of the Peace, Milwaukee, Co., Wis.

MILWAUKEE AMUSEMENTS.

GRAND OPERA HOUSE.—Performances every evening, and Wednesday, Saturday and Sunday matinees.

ACADEMY OF MUSIC.—Performances every evening, Wednesday, Saturday and Sunday matinees.

SLANSBY'S VARIETY THEATER.—Performances every evening, and Thursday and Sunday matinees.

DIME MUSEUM.—Performances every hour from 1 P. M. to 10 P. M., every day. Freaks, curiosities and excellent stage performances.

THE Milling World, Buffalo, N. Y., has reduced the size of its pages to what they used to be a long time ago, and proposes to make times lively for advertisers.

C. A. WENBORNE, Esq., of the Milling World, Buffalo, N. Y., was confined to his bed, in the Plankinton House, Milwaukee, by sickness, for five weeks. He has recovered sufficiently to get home again.

THE Red River Valley Millers' Association was recently organized at Moorhead, Minn. G. N. Kneelsy, of Moorhead, is the Secretary. The principal object of the Association is to

take special steps to introduce flour made from wheat in the Red River valley, in the East and into Europe.

MR. PALMER, of the Northwestern Miller, will soon issue a book entitled "Gradual Reduction Milling," by L. H. Gibson. The author is a practical man, and a good writer. The book ought to be a good one.

THE BRITISH GOVERNMENT gave an order March 20, to P. D. Armour & Co., of Chicago, for 5,000,000 cans of meats, for the army in Egypt. It will require over 70,000 head of cattle to fill this order.

ONE HUNDRED AND NINETY-TWO MILLIONS bushels of corn are required annually by the glucose manufacturers of the United States. The cost of a pound of glucose to the maker averages about two cents.

GERMANY has placed an import tariff on wheat of about 20 cents per bushel. Formerly it was 7 cents. The direct exports of wheat from this country to Germany for the past seven years have averaged 1,146,750 bushels per year.

ANNOUNCEMENT.

With the May number, the UNITED STATES MILLER commences the TENTH year of its existence. We have concluded to make some change in its form. The paper will be considerably enlarged, but the size of the page will be reduced. We think that our readers will be generally pleased with the change. It shall be our aim to publish as handsome a trade journal as any one can, and we shall try to keep the contents of these pages full of the most desirable matter, and to merit the patronage of the trade every where. We take this occasion to thank our many friends for their favors, whether great or small, and trust we have given them good satisfaction in the past.

THE Minnesota legislature has passed a railroad and elevator bill similar to that now in operation in Illinois. A commission is to be appointed by the governor to carry out the provisions of the bill. If impartially carried out it is thought that all parties concerned—the farmers, elevator owners and railroads—will be reasonably well satisfied.

INVENTORS of new flour mill machinery, already in the market, have not been idle during the past few months, either at home or abroad. Numerous milling patents have been granted, and a host of applications filed. Many of these inventions will, doubtless, prove to have considerable merit.

BUSINESS is reported to be very lively with the mill-building establishments in Great Britain. Many new roller mills are being built, and many more are being remodelled to a greater or less extent. The British miller will leave nothing undone to secure plenty of good wheat and to mill it economically. This course is, no doubt, the best one they can take to diminish the present enormous import of American flour.

ONE reason why some millers find milling to be unprofitable, is because the mills are not well balanced—they have too much of some kinds of machinery and not enough of some other. The result is an unsatisfactory product, which brings, of course, an unsatisfactory price. Owners of such mills cannot take steps too soon to rectify such mistakes.

MR. B. F. ISENBERG, of Huntingdon, Pa., the President of the Pennsylvania Millers' Association, has two sections of land in Kidder County, Dakota, on which he has been raising wheat. He has made a careful estimate, and reports that the cost of raising a bushel of wheat and delivering it at the railroad station on the N. P. R. R. was 34 1/2 cents. This includes interest on investment, wear and tear on horses and machinery and taxes, as well as all other expenses necessary for raising and harvesting the crop. From this estimate it seems as though wheat raising in Dakota, ought, under most any circumstances, to be a profitable business.

Without doubt a medium sized, well constructed roller mill is the most desirable kind of a place for an apprentice to learn the milling business. In such a mill he will have the opportunity of learning something of all the various steps taken in the making of flour, while if he obtains a position in a very large mill, he will be set at one particular job and kept at that. He may learn the one duty to which he is assigned well, but that's about all.

L. LUM SMITH, of Philadelphia, the publisher of the Public Herald, has been for years doing good service to the public in exposing

fraudulent and dead beat advertisers and frauds of all kinds. One of the latest exposures is that of a manufacturer of bitters, who published a testimonial favorable to his bitters purporting to be signed by Ex-President Arthur. When Mr. Arthur was written to asking if he had signed any such testimonial, an answer from his private secretary said: "I am directed to say that the pretended endorsement by the president of 'Dr. Petzhold's German Bitters' is false and unwarranted." Any person obtaining money on the strength of fraudulent testimonials is undoubtedly guilty of "obtaining money under false pretenses," a crime under the statutes of all states severely punishable.

PERSONAL.

Mr. C. C. Rice, Northwestern representative of the Richmond Manufacturing Co., Lockport, N. Y., called on us recently. His headquarters will be in Minneapolis.

John H. Nicolin is in St. Louis, representing the Wilford & Northway Manufacturing Co., of Minneapolis.

Mr. J. A. Christian, the President of the Millers' National Association, has been to New Orleans, has gone to Cuba, and will stop for awhile in Florida on his return home, which will, probably, be early in April.

Charley Gratiot, well known to thousands of millers throughout the country, is now the St. Louis agent for Kirk & Fender.

We were favored with a call, March 20, by Geo. T. Zimmerlie, Esq., well known to many millers throughout the country. He is now traveling in the interest of the Jonathan Mills' Universal Flour Dresser, and Cummer Engine for the Cummer Engine Co., Cleveland, O. Many Wisconsin millers will be interviewed by him this month.

Messrs. L. M. Sherman, I. G. Dreutzer, J. Smith and Mr. Washburn, of Sturgeon Bay, Wis., made us a pleasant call during March.

HARD ON DEFAULTERS, EMBEZZLERS ETC.

The Dominion of Canada has for a long time been a land of refuge for embezzlers, forgers, etc., whose crimes were committed in the United States. That harbor of refuge will soon be closed to such criminals, and the chances for them to escape the demands of justice will be almost entirely cut off. An extradition treaty is now being negotiated, which includes in its list of extraditable offences: forgery, embezzlement, larceny, the counterfeiting or altering money or the issuing of counterfeit or altered money, obtaining money or goods under false pretences, crimes by bankrupts against bankruptcy laws, and frauds by bailees, bankers, agents, factors or directors or members of public affairs of any company which are made criminal by any law for the time being in force. It is announced that the Government of the Dominion is desirous of making the scope of the new treaty as extended as possible, so that whatever prospects of immunity now exist for criminals of either country may be wholly removed. Under such favorable circumstances, it ought not to be difficult to frame a measure which would render the lot of the absconding criminal a hard one, at least as far as North America is concerned.

A CRACKER WAR.

From the action taken March 25th by the executive committee of the Cracker Bakers' Association, it is evident that reductions will shortly be made in the price of crackers, at the expense, perhaps, of their quality. The executive committee, which is composed of members of the association from the western, southern, and southwestern branches, met March 25th at the Grand Pacific Hotel, Chicago, and agreed to suspend all rules and prices heretofore governing the association. This decision disbands the organization, and prices will now only be governed by the caprice of the manufacturer. The association was formed four years ago, and had a membership of 115 bakers from the southern and western parts of the country, and had jurisdiction from Pittsburg to the Missouri river and from Minneapolis and St. Paul to New Orleans. At the last annual meeting, which was held sometime in February of this year, E. Nelson Blake was chosen president. The association has always governed the prices and regulated the manufacture of crackers, and while undoubtedly it has made the price of crackers higher, at the same time it has elevated the standard.

For some time past several of the members have been cutting prices, much to the annoyance of those who wished to abide by the decisions of the association, and the result was that a meeting of the executive committee was called and the organization broken up. This will doubtless have the effect of bringing about a general war, and in a short time the prices in crackers will be cut right and left.

WHAT OUR MILLING EXCHANGES SAY.

REDUCING ELEVATOR CHARGES.—It is somewhat amusing to watch the struggle which results from any attempt to reduce, in these times of low values, the cost of any commodity not in actual popular use. The grain elevators of New York furnish an instance of this kind. Their owners have organized and are making a vigorous fight against a bill now pending in the state legislature for the reduction of elevator charges. They claim that they are not making nine per cent. on their investment, and that the average life of an elevator is not over twenty years. This is sad, if true. The produce exchange is said to side with the elevator monopolies, which is probably for the reason that if agitation for a reduction of commissions was begun, they would expect the elevator men to help them stave it off. It is the high commissions charged by grain brokers and contempt for small deals that has built up the thousands of bucket shops throughout the country. That this is true does not prove that commissions are too high, though none will deny that they are liberal, even for good times. It costs more to carry on the brokerage business now than it did years ago, and the unmistakable tendency of the age is to enhance the cost and profits of middlemen. Any reference to this fact, however, or any move toward reform and retrenchment is so promptly and vigorously resented as to frequently amuse and even to excite derision.—Northwestern Miller, March 20.

ABOUT WHEAT PRICES.—We have been rather amused at the self-congratulatory articles which have been published from time to time in journals which have tried to persuade grain buyers that prices must soon go up. A few languid spurts have taken place, and on each such occasion the writer flourishes out a fine statement and says: "I told you so six months ago." Then down go the prices again, and those who have been mulcted in losses are comforted with the assurance that there is no justifiable reason whatever why values should not have been maintained. The real truth is, that wheat prices have gone down never again to rise to what had been looked upon as normal rates. For a long time speculation propped up the drooping markets, but the load accumulated until it could be supported no longer, and after the crash it became apparent to the more conservative that in the graduated scale of wheat values the normal line must be drawn at lower figures than had previously been thought possible. Political complications might possibly temporarily interfere with current quotations, but supply has so far overtaken demand as to justify a readjustment which cannot be disregarded.—From the Millers' Journal for March.

A TIME TO EXAMINE.—During the winter, which we hope is nearly over, all mills have been subjected to unusual adverse influences by the sudden changes and unprecedented cold weather, especially in the Southern States; hence it behooves the management and engineers that the first thing after the cold weather is over and the frost out of the ground that they examine carefully all shaftings, drums, and pulleys, for if they have even run all right during the winter, most of them will be found out of line when things get settled back in the spring. Whether our winters are unusual or not, we have found it one of the very best investments to have all these things gone over by a mechanical expert, once, or perhaps twice, every year. If they are all right it costs but little, and if an insignificant error is found, a short run will often pay a thousand per cent.—From the Miller and Manufacturer for March.

A SCHEME.—They've gotten up a great scheme down in Moore county, North Carolina, in the success of which all mill-furnishers should take a lively interest. They have founded a city or village, named it Vine-land, and propose to deed a lot 46x100 feet to every editor who will carry a twenty inch ad, subject to six changes, for one year. They seem to have a hankering for editors down among the "Tar heels," and united action upon the part of mill-furnishers may serve to encourage a few editors of milling papers to embrace this liberal proposition. The thing's worth trying, anyhow. We'd very seriously contemplate acceptance but that we have a mission to fulfil.—From the Milling World, March 23.

THE HENNEPIN CANAL.—The Congress of the United States brought its session to a close on March 4, and it was an ignominious close of an ignominious Congress. Like its predecessors for the past dozen years, it accomplished nothing. It did not even make political capital, which every Congress is supposed to do, whether it does anything else or not. It passed a few good bills and some bad ones; but its chief sins were sins of omission. There are any number of important questions that seek solution at the hands of our Congress, but Congress is too busy with something else.

The Hennepin Canal project was one that was sinned against by the last Congress. If that august body had confined itself to legislation no one could complain because this or that item failed of passage. But the House of Representatives has of late years occupied itself almost entirely as a body for disbursing the public funds, and on this ground the Hennepin Canal should have received some consideration. But it was thrown out of the appropriation bill, and the bill itself killed. Congressmen still see the Hennepin Canal through a glass, darkly. And the glass is inverted and empty, too. There is too much glass legislation at Washington for anything that is meritorious to stand a show. But the Hennepin Canal will go through all the same. It may take time, but it will go through yet. *From the American Elevator, March 15.*

MILLING IN AUSTRALIA.—Sir:—I beg to forward you the following remarks in answer to some questions asked regarding wages for millers in Australia in your number for December last. Wages for millers, that is to say, men who have been apprenticed to the trade and can do good mill work, including stone dressing, vary between £2 to £2 10s. per week with board, or £3 to £3 10s. per week if they find themselves. The above does not include overtime; the regular hours are from 6 a. m. to 6 p. m. Anyone who comes out must make up his mind to have nothing whatever to do with *drink*. In England it is the custom to have a glass when at market, and at other times, and no harm is done. In Australia it is very different. The climate being hot is apt to create thirst; on the other hand, a glass of wine or of spirits, instead of allaying thirst, only serves to intensify it. The blood—which on account of the heat is thin—gets excited, and a perpetual craving for drink is soon created. This will lay such a hold of a man that he will find it impossible to shake off, and he begins to go down the hill. Many a young man who set foot in Australia with excellent prospects before him, is to-day without a sixpence or a home. In many cases a downward career is commenced on board a ship. I should advise anyone going out to Australia not to take a lot of extra clothes with them, as they can get clothing just as cheap out there as in England, and it will be more suitable for the climate. In conclusion, I may say that in Australia there is a grand field open for millers who know their trade and are not afraid to work.—*Correspondence of The Miller, London.*

MORE CHANGES POSSIBLE.—The mill owner who sits quietly in his office has, during the past year or two, felt an assurance, which has gradually grown stronger, that the days of great changes in milling operations were passed. There was a time when there was no rest, no assurance of this kind. When one said to him, "This change will certainly be the last," he could not but feel that there was little dependence to be put on what was said, and however well he might be doing he lived with the dread of what was to come; that the money which he had spent would be for naught, and that he would have to go through the same thing again, and buy new machines. After the thing got to going once, after the spirit of change and revolution had taken possession of the minds of the millers and mill-furnishers, it appeared that there was no end. But the end apparently came, and, as said before, there now appears to be a time of peace and security. After the great boom in milling machinery had in a measure subsided, there were a few who attempted to start little boomlets of their own—revolutions on a small scale, but they did not revolve; there was no overturning. A revolution implies something more than a change of detail. There must be a change of principle at the bottom to bring about results which are radical in their nature. The foundation of the milling revolution was the recognition of middlings. We may look for improvements and changes in detail, and it is not at all improbable that there may be such changes, such inventions, as will create quite a little disturbance. They lie in the direction of the simplification of present methods. There are a number of inventors of ability and energy working in this direction. Judging from a record of their past achievements which have been successful, we cannot but believe that within the next six months or a year there will be presented to the attention of the millers of this country new machines and new ideas, and of a character quite startling on account of their simplicity and the directness with which they reach results which are now brought about by great circumlocution and complication of mechanical devices.—*The Modern Miller for March.*

OUR NEW COMPETITOR.—As noted elsewhere the Canadian Pacific Railway Co. is sounding the praises of Manitoba wheat and flour in the British Islands in the hope, of course, of building up a profitable trade for itself. Rumor has it that this company has

even gone into the business of buying and shipping wheat abroad as a means of making the products of the Canadian Northwest better known in the markets of the world. This is a matter affecting the interests of all American millers, whether exporters or not, for any permanent diminution of our flour exports would result, for the time being at least in demoralizing trade at home. Whether Canadian flour takes the place of American flour in British markets, or British millers by obtaining an inexhaustible supply of No. 1 hard wheat at a low price can shut out our flour, amounts to the same thing in the end; that we lose the patronage of our best foreign customer in the matter of flour.

It is best to look the matter squarely in the face. There is nothing to be gained by deceiving ourselves as to the facts in the case, and therefore it would be folly to decry the character of the wheat which the Canadian Northwest is able to supply. Almost universal testimony accords to Manitoba spring wheat a very high character, equal to the wheat of any locality in the world. A disinterested correspondent of this paper at one of the flour centers of Great Britain, writes us as follows:

"The Agent General of the Canadian Pacific Railway Co., in London, has lately sent me samples of Red Fife wheat and a patent grade of flour made from it in Winnipeg. The wheat is ahead of any spring ever seen here. The flour is a grand sample, but owing to imperfect cleaning before reduction, or imperfect purification during reduction, I only class it as second grade patent. It has a higher water-absorbing power or capacity than any sample of Minneapolis or Glasgow spring flour I know of. In this flour I find 33½ per cent. of moist gluten. The gluten of this Manitoban flour seems to me of a darker cast or shade of color than that of other spring wheat flour. The flour on that account is deficient in bloom, or a yellowish tinge; but the bread of two tests I have made is in no way affected, is in every way faultless. Beyond doubt there will be a rush by Glasgow millers on this wheat, and if the bulk is equal to sample Minneapolis will feel it."

There remain, then, only two points to be considered, viz: Whether this wheat can be set down in the British markets at a price which will compete with our Northwestern flour, and whether the British millers will properly treat their magnificent wheat when they get it. The first contingency is largely within the control of the Canadian Pacific Railway Co. The second is that British millers will have to give up this "blending" or mixing if they wish to produce an article of flour equal to the products of our own mills. In default of either of these contingencies the new competitor vanishes.—*American Miller.*

BUCKWHEAT MILLING.—The best way to mill buckwheat is to thoroughly scour, or rather hull it, before being reduced to flour, and New Castle stones are generally preferred for this purpose. The sizes are generally about thirty inches in diameter. The burrs used in grinding must be in perfect condition. The furrows should be the same depth from the eye to the periphery with a very fine feather edge, and dressed out smooth, using a furrow staff and a sandstone rubber, or preferably, an old piece of burr block, either of which is better than corundum. Many millers put in from ten to twelve cracks to the inch, but it will be found that better work can be done with a smooth face.

There are various methods in use for clothing the reel, which is usually about ten feet long. Some millers use four feet of No. 6 cloth at the head of the reel, the remainder No. 7 or 8. Another method is to commence at the head with eight feet of No. 8, four feet of No. 9, and two feet of No. 2, on a fourteen-foot reel. A reel calculated to bolt ten bushels an hour is generally made ten feet long and clothed with three feet of No. 8, four feet of No. 10, and the remainder No. 1 cloth.

There can be sixty pounds of flour made from one hundred pounds of buckwheat. It is often run through the burrs twice and the chop passed through a fine reel, such as No. 14, to extract the middlings or cuttings. The second grinding may then be passed through the last described reel. All the middlings that pass through the coarse cloth should be reground after having been purified, but buckwheat should never be ground close at any time.

Too much attention cannot be given to the cleaning of buckwheat before grinding, and every miller who grinds buckwheat should have a first-class buckwheat huller in his mill. If he has not he should first simply crack the grain in the manner described and then clean it by the purifier and bolts, but a good buckwheat shucker or huller will pay for itself in a short time. By simply grinding the grain after being scoured a large portion of the shucks or hulls, and all of the thin yellow skin lying between the hull and the starchy part are ground and cannot be separated so well from the flour by bolting as if the grain has been operated on by a shucker, so that the flour is liable to be specky and dark; besides if the yellow skin be ground it imparts a very bitter taste to

the flour. All matter that is likely to deteriorate the flour should be removed before grinding. If the grain is first dried the hull can be removed much easier.—*JOHN D. NOLAN in The Corn Miller.*

ANOTHER INFRINGEMENT CLAIM.—Notices of infringement have been sent by Elias Bomberger, and Francis J. Martin, of Lancaster Co., Penna., to the millers of the State, and possibly to those of other States, the claims being based upon an improvement in flour bolts, patented by Ephraim D. Auchey and Francis J. Martin, May 30, 1871. Among other advantages claimed were a fan or beater placed inside of the bolting reel or machine, and an independent motion imparted to it in the same or reverse direction of the reel, through hollow gudgeons or sleeves on either end. The parties sending out the notices mentioned, say in them, that the invention proving very useful, other parties have since the granting of the patent, built and placed into market machines under various names of middlings purifiers, centrifugal reels, etc., in all of which, the invention of Auchey & Martin is used without leave or license. The circular winds up in the following summary manner: "This is therefore to notify you to call and settle for the machines you have in use within thirty days, and save the bringing of a suit against you." The specifications given in the notice are too vague to give an idea as to just what the claimants are after. No miller need be at all alarmed about the matter, and probably the best way to settle the affair would be for a miller to stand the threatened law suit, and if nothing came of it, to then try a little law on his own account.—*From the Millers' Review for March.*

A TIME TO BUY.—We have before asserted and we are disposed to reassert, that now is the best time the present generation will ever see to purchase machinery, put up new mills, or repair and reorganize old ones. Machinery men are anxious to sell, and are willing to do so at a fair profit. Orders are slack and business dull and the can afford to do work much below the rates of flush times, rather than to close up, or to work short time or short handed. These times will soon be over, business will start off anew, shops will be full of orders, prices will raise, and you will have to wait your turn. If you contemplate new works or improvements, do it now. All the advantages of best quality and low prices are on your side now, but as soon as the reaction sets in it will be on the other side, and you will have to pay a round advance for your negligence and delay. Iron, steel and all kinds of material are lower now than ever; labor is cheap and plenty, and the true business policy is to buy now when everyone wants to sell. Now, orders are eagerly sought for, soon you will be seeker instead of sought, and prices will rise accordingly.—*From The Southern Miller for March.*

IN building a new mill, the questions of what competition will have to be met, and what market the mill must work for, merit equal consideration with the questions of wheat supply, freight rates, etc. As the larger merchant mills are not standing still, but are improving their process of manufacture every year, it is absolutely imperative upon the smaller mills to keep even place with them, or else go out of existence. We do not believe that the smaller mills are doomed to extinction, but we do believe that they must be better built and better managed. It is idle to talk of competing with the Pillsbury or Washburn, or any other large mill, unless the same careful attention is paid to machinery, and system and equal care bestowed upon the detail of the business.—*The Millwright and Engineer.*

THE blame for the crowded condition of many of our mills, rests partly upon the millers who have let their desire for a large mill outgrow the size of their building, and partly upon the mill-builders and milling engineers, who have consented to plan and erect machinery in such cramped quarters. In the long run we believe both the responsible parties must suffer financially for every such mistake—the miller by reason of the inferior work done, and the mill builder by reason of the injury to his reputation that must result.

If you want a 150-barrel mill and only have a 75-barrel building, put up an addition to it large enough to provide for the extra space required. And don't be afraid of getting more room than is necessary. Better have too much than too little any time.—*The Roller Mill.*

GRAIN EXPORTS VIA NEW ORLEANS.—The exports of grain via the great Mississippi River and Gulf route is growing apace—the legitimate results of a proper recognition of a great natural highway to the sea. As many as eighteen vessels cleared from New Orleans during the month of February, loaded with grain from the boundless harvest fields of the Central West. Fourteen of the

vessels mentioned sailed under the British flag, one under the German and three under the Spanish. Ten cleared for Liverpool, and one each for Rouen, Antwerp, Dublin, Bremen and Hamburg, Frederickshaven, Barcelona and Amsterdam. There were 743,927 bushels of corn and 49,669 bushels of rye taken out, the largest single cargo being by a British steamship, that of 104,649 bushels of corn, for Amsterdam.—*The St. Louis Miller.*

NONSENSE.

Mrs. —away, while cleaning house, asked her husband to nail up some []; he refused; she looked at him, told him his conduct was without [], and beat him with her [] until he saw []. He now lies in a [] state and may soon be a subject for dis[]. A man must be an [] his life and limb in such a way as that. It has undoubtedly put a [] to his existence.

Hearing that the brakeman's foot got caught in the frog, and he was run over, Mrs. P. remarked: "Law sakes! I've seen pretty big frogs down in Ille'noy, but they was harmless and never attacked anybody. Did they kill the one that caught the brakeman's foot?"

"Just listen to this, Martha!" exclaimed Mr. Jarphly, who was reading his evening paper: "One of the dogs in the London prize show is valued at \$50,000! Good gracious! That's more money than I ever expect to be worth in my life."

"Some dogs are worth more than others, Jeremiah," quietly remarked Mrs. Jarphly.

And Mr. Jarphly eyed her for a moment, and said she need not sit up for him that evening.

BEFORE AND AFTER.—"My dear," said Mrs. Popperman to her husband last evening, "I was looking over a bundle of old letters to-day, and found this one which you wrote to me before we were married; when you were young and sentimental."

"What does it say?"

"I'll read it: 'Sweet Idol of Lonely Heart:

If thou wilt place thy hand in mine, and say, dear love I'll be thy bride, we'll fly to sunny Italy, and there 'neath soft cerulean skies we'll bask, and sing and dream of nought but love. Rich and costly paintings by the old masters shall adorn the walls of the castle I'll provide for thee. Thy bath shall be of milk. A box at the opera shall be at thy command, and royalty shall be thy daily visitor. Sweet strains of music shall lull thee at eventide, and warbling birds shall wake thee from thy morning slumber. Dost thou accept? Say yes—oh, fly with me.'"

"And I flew," said Mrs. Popperman. "But if I had been as fly as I am now I wouldn't have flown."

"Why, my dear?"

"Why, not? Have you done as you promised in that letter? When we were married did we 'fly to sunny Italy and bask 'neath soft cerulean skies; did we go to Hoboken and spend two weeks fishing for eels on the end of a wharf?"

"Well, yes."

"And how about the pictures? You know very well that every rich and costly painting in this house is a chromo from the tea store."

"Well?"

"'Thy bath shall be of milk.' Do I bathe in milk? or isn't it like pulling teeth every morning to get ten cents out of you to buy milk for the baby?"

"Kinder."

"'Royalty shall be thy daily visitor.' The only visitors I have are the book agents and the clam peddlers."

"Taint my fault."

"'Sweet strains of music shall lull thee at eventide.' Oh, yes. The only chance I have to listen to the strains of music is when you and I go out walking at night and follow a monkey and a hand organ around the block."

"Oh, I am so sleepy."

"I don't care if you are. Where are the warbling birds you promised me? I hear Mrs. Maginnis' crowing roosters every morning; perhaps they are what you meant."

"Well, never mind."

"But I will mind. I was to have a box at the opera. Where is it? The only time I go to an opera is when you get bill-posters' tickets to a dime museum."

"It's too bad."

"It really is too bad. And then you said we'd talk and 'dream of nought but love.' Since I married you we've talked and dreamt of nought but rent. Good night sir."

And Mrs. Popperman turned out the gas, and jumped into bed, leaving Mr. Popperman to bark his shins against the bureau in trying to grope to bed in the dark.—*N. Y. Citizen.*

THE driven well patents of Nelson Green expired on the 14th of January, 1885, so that it is now possible for farmers and others to drive wells on their premises without fear of vexatious law suits, or of being compelled to pay a royalty to any one. It is generally believed that the patents were improperly issued, driven wells being in use long before they were granted. But it is a satisfaction to know that whether rightly or wrongly issued, they are no longer in force.

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MILWAUKEE, APRIL, 1885.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

D. G. TEPPER, Esq., Editor of *The Millers' Journal*, New York, made us a very pleasant call, March 30th.

A FRENCH company has recently patented a method of cool grinding by means of rolls in which water or some other cooling liquid is allowed to circulate.

WE hereby acknowledge the receipt from the secretaries of the annual reports of the boards of trade in New York, Boston, Philadelphia, Chicago, Detroit, St. Louis, Minneapolis, Buffalo and San Francisco.

Mr. Geo. C. Tietjen, representing the Stillwell & Bierce Mfg. Co., of Dayton, O., and Mr. W. R. Hobkirk, representing the American Oak Leather Co., of Cincinnati, O., made us a pleasant call April 1. They report business improving.

MESSRS. EDW. P. ALLIS & Co. have sent us a copy of their new catalogue concerning porcelain roller mills. It is a handsome piece of work, and some exceedingly favorable offers are made to millers to induce them to try the use of porcelain rolls, which shows conclusively the great confidence the firm has in them. The catalogue also contains letters from many millers using porcelain rolls.

1,500 CONUNDRUMS.—We have just received from the publishers a handsome little book with the above title, which contains over fifteen hundred conundrums, suitable for home and fireside amusement. One feature of it is that the conundrums are all original, and have never appeared in print before. It contains 116 pages, with handsome paper cover, and will be sent post-paid to any address upon receipt of 15 cents.

AN IMPORTANT MISSION.

Mr. C. H. Seybt has been sent by the executive committee of the Millers' National Association on a mission to Europe to meet European millers and to establish a code of regulations for the future conduct of the American export flour trade. The items to be provided for affect flour sacks, bills of lading and transportation in general and in particular, insurance and a court of arbitration for the settlement of and disputes that may arise. Mr. Seybt has a very extensive acquaintance with the European trade and is a gentleman of great executive ability and we do not doubt but what he will be able to secure the adoption of rules, which will be just and satisfactory to dealers on both sides of the water.

It is to be feared that the president of these United States was not aware how intimately acquainted Rasmus B. Anderson is with the king of Sweden and Norway, when he appointed him minister to Denmark instead of to the former countries. Some years ago, while stopping in Christiania during a visit to Norway, the ex-professor and insurance agent learned that his majesty King Oscar was to travel on a certain steamer going down the bay. He immediately shouldered his grip-sack and took passage on the same boat, expecting, of course, that the king would eagerly embrace the opportunity of learning something from the distinguished American. No matter who started the ball rolling, but the two great men engaged in conversation, and the king, among other things, said: "It is a fine country you have over there in Wisconsin." "Yes," answered the professor, "a fine country and a fine people. We are all princes in that country." The king straightened himself up to his full height of six feet three inches, took out his cigar case, selected one for himself, and offered the case to the professor, with these words: "May I offer your royal highness a cigar?" And Rasmus smilingly accepted.

A WONDERFUL MODEL MILL.

Messrs. Edw. P. Allis & Co., of Milwaukee, caused to be built for exhibition at the New Orleans Exposition, a complete model 50-barrel roller flour mill. The model is built to scale, being one-eighth the actual size of such a mill. It is fitted up with little Gray's noiseless belt drive roller mills, Geo. T. Smith middlings purifiers, grain cleaning machinery, flour packer, weighing scales, etc., and is driven by a model Reynolds-Corliss steam engine, just as a mill of full size should be. We present in Supplement No. 1, with this issue, a very perfect view of this ingenious piece of mechanism, and in Supplement No. 2, we present perfect views of the well known Gray roller mills. This model mill has been an object of great attention at New Orleans, and thousands not in the trade have obtained a pretty fair idea of modern milling by closely observing it, and it has also been an object of attentive study by millers from all parts of the world.

[Written for THE UNITED STATES MILLER.]
MARKET REVIEW.

Flour, in the early part of the month, was slow of sale, owing in a great measure to the large quantity detained here on cars and in warehouse, which could not be moved on account of the ice blockade on the lakes. In the last two weeks of the month, and as navigation opens, the demand has improved and a rather firmer feeling has existed. Local jobbers have shown more disposition to purchase, taking both spring and winter wheat flours, whilst exporters are making more inquiries, and several orders have been filled. Cable orders received are still a shade under the views of millers, though in some instances buyers have slightly raised their limits above those of last week; some holders adhering to full prices, preferring to hold their flour off the market for a time in anticipation of realizing better prices. Liverpool (England) advices indicate an active demand for both wheat and flour at firmer prices, and stocks which had been accumulating had been rapidly cleared off. Minnesota flours were worth about 32s. 6d. for patents and 26s. to 28s. 6d. for bakers.

New York reports a very dull market for state and western flour, dealers showing but little inclination to purchase, even at the present low range of prices, which for some grades show a decline. The exports this year as compared with last are as follows: Since January 1, 1885, 1,423,244 bbls., and for same period in 1884, 1,157,255 bbls.

Western shipping extras are quoted at \$3.15@3.40; superfine, \$2.60@3.05; St. Louis common to fancy, \$3.85@4.60; city mills extra, \$3.80@4.70; patents, \$5.00@5.25. The demand from the trade continues moderate, and prices are about steady. We quote: Rye flour, \$3.45@3.80 for superfine brands and \$2.25@2.50 for fine brands, with a firm market, holders not pressing sales. Buckwheat flour ranges from \$2.25@2.50 per 100 lbs. There is a marked absence of speculation in the flour market, notwithstanding the heavy war clouds presently embarrassing the powers of Europe. Under liberal offerings of flour, British markets continue dull, although a better inquiry has been manifested in the past month, and a general feeling prevails that with spring weather flour will meet with an improved demand at firmer prices.

The quantity of flour manufactured annually in the United States is about 66,000,000 bbls., of which, in 1884, the Minneapolis mills turned out 5,318,000 bbls., about one-twelfth of the whole manufacture. Minneapolis received, in 1884, 29,322,672 bushels of wheat, of which over 84 per cent. was made into flour on the spot, and less than 16 per cent. was shipped. Of the 5,318,000 bbls. of flour made in 1884, about 65 per cent. was shipped to Europe.

Mill-feed is firm, with a good consumptive demand. We quote: Bran, \$13.00@14.15; coarse middlings, \$14.00@14.25; fine, \$15.00, free on board, at Chicago or Milwaukee.

Wheat markets have ruled steady throughout the month; occasionally panicky, caused by the changing situation of foreign political affairs. English cables at times noted an advance and at other times a decline, foreign advices upon the whole being rather unfavorable. At Chicago and Milwaukee markets considerable excitement has been manifested on several days during the month, and large blocks of wheat changed hands. Here prices opened on March 2d at 78½c. for May wheat and closed on the 31st at 78½c. for May, showing little or no change. Fluctuations, however, have at times been so sudden and violent that parties have found it difficult and sometimes impossible to execute stop orders at the limits set for them.

The *Mark Lane Express* of March 30th, in its review of the British grain trade for the last week, says: "Fine weather has brought spring sowing nearly to a close. Sales of English wheat were at 32s. 7d. as against 38s. 1d. for same time last year. Foreign

wheat recovered from its depression, off-coast business was confined to the sale of one cargo of Oregon at 35s. 4d. and one cargo of California at 35s. 3d. Nine cargos arrived; two were withdrawn and ten remained. There are due twenty to twenty-five cargos, mostly California. The markets were generally quiet. Flour, steady and 6d. dearer."

For the present, and pending a settlement of existing differences between Great Britain and Russia, we may expect a good demand from Europe for American products. Importers on the other side of the Atlantic will not undertake the risk attending the purchase of property at Russian ports, with the chances of its being locked up by blockade in the event of war. So long as preparations for war by England and Russia continue on the present extensive scale, the attention of British merchants will be directed more to American markets for supplies of wheat, flour and provisions. We may also look for an increased amount of tonnage being headed for American ports. British vessel owners will not undertake the risks attendant on having their vessels on passage to and in Russian ports should war be declared.

The following was the visible supply of grain on the dates named, as reported by the statistician of the New York Produce Exchange, and does not include Minneapolis and St. Paul:

	March 21, 1885.	March 28, 1885.	March 29, 1884.	March 31, 1883.
Wheat, bu.	43,766,592	43,660,972	28,580,898	22,631,645
Corn, "	8,194,563	9,558,283	17,773,877	17,788,249
Oats, "	3,092,075	3,086,182	5,021,493	4,320,782
Rye, "	364,070	359,153	2,248,604	1,910,863
Barley, "	1,386,975	1,201,824	1,517,341	1,489,978

Railroad freights are quiet on the basis of 15@17½c. per 100 lbs. to New York.

Lake freights quiet and steady at 2½c. for corn and 3c. for wheat to Buffalo, and 5½@6c. to Oswego.

AARON BURR was noted for being a very egoistic man, and an unbeliever in all the doxies of the day. He attended church in Albany, N. Y., with regularity, and always made it a point not to come in until services were commenced, it was supposed for the sake of being noticed when he walked down the aisle to his seat in the first row from the pulpit. The church authorities asked the pastor to publicly reprimand him, which he did in the following manner: As Burr was walking down the aisle, the minister stopped in his discourse and said: "Sir, I will appear at the judgment seat against you." Burr drew up his little figure, and in his rich bass voice said: "Sir, in all my legal practice I have considered that class of criminals who turned State's evidence the most degraded and to be despised."

MANAGEMENT OF PURIFIERS.—The Geo. T. Smith Middlings Purifier Co. give the following hints on the management of the purifier: Always load a machine as heavily as possible without making the tailings too rich. If necessary let the purifier return to itself sufficiently to accomplish this end. Cut off and return a few inches from the head of the machine to avoid specks. Until the machine is properly adjusted the pockets should be emptied daily, but whenever it is possible to judge closely enough as to waste no harm will be done if they are not emptied. On extremely coarse middlings if very strong air currents are desired increase the speed of the fan by decreasing the diameter of the pulley on fan shaft. As the air is decreased the sifting capacity of the sieve is increased, therefore you can reduce the richness of the tailings by reducing the volume of air on the tail section of the cloth, or vice versa. When dust collectors are used in connection with the purifier, careful examination should be made to see that they do not impede the necessary flow of air through the cloth. Air currents of proper strength can be maintained by suitably increasing the speed of the fan.

PERSONAL KNOWLEDGE.

Hidden or occult knowledge might have been once a part of the mental paraphernalia in which scientists dressed their discoveries, and inventors concealed their improvements. But occult knowledge is not a thing of the past, even in these days of mechanical exactness and experimental demonstration. It is possible for a workman to hold some method or process so securely that, even if willing he may find it difficult to impart it to a learner. This statement does not refer to "tricks in the trade" which are mere mountebank pretensions, but to real knowledge of absolute value that cannot be readily imparted. When a man is found who possesses this knowledge in any department of mechanics, he is a valuable man; what he knows on his own specialty he knows thoroughly. There can be no question that Cicero's statement, "Poeta nascitur, non fit," is an absolute truism when applied to some workers in mechanics—they are not made, but they are born mechanics.

Illustrations of this fact are probably familiar with many experienced and elderly mechanics. There is a tool maker in an extensive establishment, in which coiled springs of steel wire are largely used. The springs are wound from the annealed wire, and after being completed are hardened and tempered. Some of them are "open" and some are "close" springs. Out of 22,000 springs of which an account was kept in consecutive workings, only six springs failed the severe trial test. The temperer was unwell and out for eight working days, and of the springs hardened and tempered by his assistant, who had a year's instruction, less than one-half passed the test. In this case the writer had reason to know that the temperer had used his best endeavor to have his assistant his ultimate successor. Some lack of sensible impression made by heat and color on feeling or on sight must have been the cause for the difference between the result of the assistant's work and that of his teacher.

There is an old machinist now living, but superannuated, who was famous in his day for his superior hand-made edge tools. A pocket knife with a restored blade of his workmanship was doubled in value because he had made it. This was before the manufacture of cutlery had been attempted in this country. His two sons succeed him, but they have never been able to equal their father in this direction.

At a large manufactory of sword blades for army purposes, masonic and other regalia, one man has tempered them for many years. Although he has been engaged in other business for years, he is called whenever a batch of blades are to be tempered. Although he is willing to impart verbal instruction and help a learner, he has never had a pupil to equal him.

There is a large scythe manufactory in a New England town, making 14,000 dozen scythes a year, and the president of the company has for years hardened and tempered every scythe that leaves the works, because no other man in the works can do so well.—*Scientific American*.

MILLING PATENTS.

The following list of patents relating to milling interests granted by the U. S. Patent Office, during the last month, is specially reported by Stout & Underwood, Solicitors of Patents, 66 Wisconsin st., Milwaukee, who will send a copy of any patent named to any address, on receipt of 50 cents:

Issue of February 24, 1885. No. 312,623—Roller-mill; F. Ferrier, Vallejo, Cal. No. 312,672—Bolting-reel; A. J. Terry, San Francisco, Cal. No. 312,744—Grain-screen; D. D. Mook, North Pembroke, N. Y. No. 312,914—Flour-bolt; G. T. Smith and W. F. Cochran, Jackson, Mich. No. 312,968—Apparatus for filling and heading barrels; A. C. Cary, Boston, Mass. No. 313,028—Dust-collector; J. M. Sprinkel, Sterling, Ill.

Issue of March 3, 1885. No. 313,144—Sweep-coupling for grinding-mills; E. M. Wilcox and W. J. Hopkins, Whitewater, Wis. No. 313,152—Flour-bolt; J. B. Allfree, Cumberland, Md. No. 313,166—Grist-mill; C. J. Blum, Salem, N. C. No. 313,312—Roller-mill; J. W. Galloway, Dayton, O. No. 313,337—Hornimill; C. C. Jesse, Charleston, S. C.

Issue of March 10, 1885. No. 313,712—Grain-scourer; G. A. Dawson, Cardington, O. No. 313,756—Centrifugal Flour-bolt; C. E. Moyer, Stevens Point, Wis. No. 313,816—Roller-mill; J. M. Finch, Jackson, Mich. Re-issue, No. 10,571—Roller Grinding-mill; F. Wegmann, Zurich, Switzerland.

Issue of March 17, 1885. No. 313,911—Grain-cleaner; D. Best, Albany, Oreg. No. 313,984—Grain-huller; F. Burchardt, St. Charles, Mo. No. 313,987—Machine for Cutting Oats &c.; F. Burchardt, St. Charles, Mo. No. 313,988—Bolting-reel Attachment; F. Burchardt, St. Charles, Mo. No. 313,989—Grain-huller; F. Burchardt, St. Louis, Mo. No. 313,997—Machine for Hulling Corn; C. S. Day, Waverly, Md. No. 314,123—Grain-cleaning machine; J. D. and H. Hasselbusch, St. Louis, Mo. No. 314,137—Attachment for Flour-bolts; J. M. R. Kennedy, Dushville, Mich.

Issue of March 24, 1885. No. 314,278—Scrapers for Roller-mills; J. Warrington, Indianapolis, Ind. No. 314,370—Grinding-mill; J. A. Field, St. Louis, Mo. No. 314,439—Grain-scouring and Cleaning Machine; H. Dietz, Berlin, Germany. No. 314,497—Separating-machine; No. 314,498—Dust-separating machine; P. Van Gelder, Sowerby Bridge, England. No. 314,552—Feeder for Roller-mills; J. W. Wilson, Brookville, Kas.

BALTIMORE'S GRAIN FACILITIES.

A correspondent of *Bradstreet's* says: "Baltimore is well equipped with facilities for the storage of grain. The Baltimore & Ohio Railroad operates four stationary elevators, and the Northern Central Railroad has two. Three of these are at Locust Point, two at Canton and one at Camden Station. These altogether have a capacity of over 5,000,000 bushels. The last elevator mentioned was built in 1883 for the local trade of the city. It was then expected that the erection of this elevator would indirectly increase the foreign trade in oats, but thus far no decided gain can be traced to it. In addition to the above there are four floating elevators, which can handle 14,000 bushels per hour. There have been no changes in the tariff of charges since October 10, 1883. The rate of 1½c. per bushel was then made for the first ten days, when the grain was received from cars. This includes weighing and delivering to carts or vessels, as well as wharfage and storage. When the grain is received from vessels the rate is 1½c. per bushel. For each succeeding ten days the charges are ½c. per bushel. If the grain is delivered in bags 1c. per bushel is added, and for screening and blowing the rate is ½c. per bushel. The inspection of grain at Baltimore is excellent, and last year the president of the Corn & Flour Exchange took pleasure in recalling the fact that from the day the first carload went into elevator A down to the present time, with the exception of a small lot of corn, not a bushel of grain has been posted as being out of condition."

CHANGES IN POSTAGE TO TAKE EFFECT JULY 1, 1885.

The following important changes were made by the Congress just adjourned, in the postal laws.

First—The weight of all single-rate letters is increased from one-half ounce each or fraction thereof to one ounce each or fraction thereof. The same increase of weight is allowed for drop-letters, whether mailed at stations where there is a free delivery or where carrier service is not established.

Second—All newspapers sent from the office of publication, including sample copies, or when sent from a news agency to actual subscribers thereto, or to other news agents, shall be entitled to transmission at the rate of one cent per pound or fraction thereof, the postage to be prepaid. This is a reduction of one-half from existing rates.

Third—Any article in a newspaper or other publication may be marked for observation except by written or printed words, without increase of postage.

Fourth—A special stamp of the value of ten cents may be issued, which when attached to a letter, in addition to the lawful postage thereon, shall entitle the letter to immediate delivery at any place containing 4,000 population or over, according to the Federal census, within the carrier limit of any free delivery office, or within one mile of the post-office or any other post-office coming within the provisions of this law which may, in like manner, be designated as a special delivery office; that such specially stamped letters shall be delivered between 7 o'clock A. M. and midnight; that a book shall be provided in which the person to whom the letter is addressed shall acknowledge its receipt; that messengers for this special delivery are to be paid 80 per cent. of the face value of all the stamps received and recorded in a month, provided that the aggregate compensation paid to any one person for such service shall not exceed \$30 per month, and provided further that the regulations for the delivery of these specially stamped letters shall in no way interfere with the prompt delivery of letters as provided by existing law or regulations.

A WALL STREET WIT.

Perhaps the most popular man in the city among Wall street bankers and brokers, up-town club men, patrons and followers of the turf, and members of the New York Athletic club and the Racquet club is William R. Travers. Although a thorough and well-informed man of business, an able financier, and a capitalist, he is known best through his geniality, his kindly feeling toward young men, and his witty and humorous remarks.

In public places Mr. Travers is inclined to be reserved, and glimpses of his humor have depended on his intimate acquaintances for circulation. Some of his best sayings were years ago, when John Morrissey was in the light of his glory. Morrissey thought he knew a good race-horse when he saw it, but the colts that he tried to run at Saratoga were costly animals for him. While he was patting one of his colts on the track one day Mr. Travers walked by.

"What have you g-got there, John?" he asked, as he stopped near the animal.

"A race-horse," Morrissey replied, with an air of satisfaction.

"A r-race-horse!" Travers exclaimed.

"Yes, sir, a race-horse. Are you going to bet on him?"

"Yes, I'll bet on him," Travers replied decidedly.

"How?" Morrissey asked, somewhat in doubt.

"I'll c-copper him."

A former acquaintance in Baltimore met him on Broadway, and, turning aside, began to chat with him.

"You stammer more since you have lived in New York," the friend remarked in the course of the talk, "than you did in Baltimore."

"B-b-bigger place," Travers replied.

At the call of the list in the stock-exchange a dispute arose over a bid for a stock. Mr. H. G. Stebbins is credited with being the gentleman in opposition to Mr. Travers. Stebbins asserted that he named the price.

"It may be that Mr. St-Stebbins g-got through before I did, b-but I'll b-be hanged if I didn't b-begin b-before h-he did," Travers replied.

The stock was awarded to him.

A story told about him in Brooklyn relates to a visit there to attend the wedding of the daughter of a friend who lived in Montague street. It was his first visit in the neighborhood, and after he had ascended the stairs half-way up the hill from the ferry, he went astray in Montague terrace, and was at length compelled to ask for directions.

"I desire to reach M-Montague street," he said to a passer-by. "Will you b-be k-kind enough to p-point the w-way?"

"You are g-ing the wr-wrong w-way," was the stuttering reply. "That is M-Montague street."

"Are you m-making fun of m-me, m-mimicking m-me?" Travers asked, sternly.

"N-no, I assure you, sir," the other replied, with all due haste to repair an apparent lack of good manners. "I-I am as b-badly af-flicted with an ob-struc-struction of speech," as you are.

"Why d-don't you g-get c-cured?" Travers asked, with mischief in his eyes. "G-go to Dr.—and you'll g-get c-cured. D-don't you see how well I talk? He c-cured m-me."

"Men with gigantic schemes have sought him time and again. Once he was appealed to by a gentleman who wanted to sell a mine. He showed all the reports, and said he had taken \$1,000,000 out of the mine. He was willing to sell the property for a sum considerably less than the amount produced.

"If you ha-hadn't ta-taken anyth-thing out I think I would ta-take the m-mine," Travers responded.

He had his adventures at the democratic convention which nominated Gen. Hancock for president. The day after the nomination Mr. Travers, while walking up a street, was accosted by a stranger who was carrying more liquor than was good for him, and had a box of cigars under one arm.

"Say! Are you a Hancock man?" was the greeting.

"Yes, 'I'm a H-Hancock man," Travers replied.

"Well, it's darned lucky for you. Take a cigar; they're first-raters. I'm working for my candidate, I am, an' working both ways, too."

Accepting the cigar without offense, Travers walked on, but, hearing a row behind, turned and looked back. He saw the Hancock man pounding citizens who didn't happen to be for his candidate.

"Then," Travers said afterward, in describing the incident, "I b-began to understand b-both ways of w-working."

Two raps for Henry Clews, the banker, are recorded. It has been a frequent boast of Mr. Clews that he is a self-made man. Travers heard him on one occasion, and immediately dropped into a sort of reverie, with his eyes fixed on Mr. Clews' bald pate.

"Well, what's the matter, Travers?" Clews asked, somewhat impatiently.

"H-Henry," Travers inquired, "d-didn't you s-s-say you were a self-made m-man?"

"Certainly; I made myself," Clews replied warmly.

"Then, when you were ab-b-bout it, why d-didn't you p-put m-more h-h-hair on the t-top of your h-head?"

The famous Vanderbilt ball exercised many gentlemen on the question of characters and costumes. Mr. Clews was in a quandary, and he applied to Travers for a suggestion. It appeared that Travers had taken advantage of his friendly relations with Wallack, Mapleson and Abbey by sending inquiring friends to them for permission to select from their theatrical wardrobes. The story goes that the managers had mildly hinted to Travers that patience with the "fashionables" had ceased to be a virtue, and Travers was not inclined to favor any more.

"Clews," he said, after some reflection, "why d-don't you sh-sh-ugar coat your h-head and g-go as a pill?"

No doubt his most severe remark touched on the reputation of a well-known lawyer. While standing at the window of his office, Travers surprised several friends who were chatting at one side by a forcible exclamation.

"There!" he added, quickly, and pointing across the street; "there's 'Slem' B-Barlow with his h-hands in his own p-p-pockets."

Besides knowing how to rap others, Travers knows when he receives a rap. Going up town with several brokers, Travers spied a man selling parrots in front of St. Paul's church.

"H-hold on, boys," he said, mysteriously, "we'll have some f-fun."

Hailing the parrot-seller and indicating one of the birds, Travers asked: "C-can that p-parrot t-talk?"

"Talk?" the man replied with a contemptuous sneer. "If he can't talk better than you can I'll ring his blasted neck."

"C-come on, b-boys," Travers called out; "this f-fun is p-post-p-poned until another d-day."

A young friend, who had taken his advice in regard to a fortunate speculation and withdrawn his money from Wall street, bought a house. Subsequently Travers met him and asked him how the house suited.

"The house is all right, Mr. Travers," the friend replied; "but I am very much troubled with rats."

"G-get a c-cat," Travers suggested.

"I've had dozens, but the rats actually drive them out of the house."

"G-get a d-dog," was Travers' second suggestion. "I know where you c-can g-get a g-good d-dog."

He recommended his friend Harry Jennings, the dog fancier, and agreed to go and help in selecting a dog. One was thought worthy, and Jennings, having put a dozen or

more rats in the pit, it was thrown in to show how quickly it could kill them. The dog killed all except one—a gray-bearded old rat almost as big as the dog—which seized the dog by the lower lip and held on. The dog y-lped with pain and tried to shake off the rat, but without effect.

Travers, who was thoroughly excited and running around the pit, shouted:

"B-buy the rat! B-buy the rat!"

Plunger Walton was introduced to Travers at Saratoga when the former was at the height of his success in breaking book-makers and pool-sellers.

"I've wanted to know you some time, Mr. Travers," Walton said after a while. "We can do business together. I've got good judgment on horses and horse-racing, and you have on stocks and stock speculations. I've made \$350,000 on horse-races in the past two years. Now, you give me points on stocks, and I'll give you points on horses. What d'ye say?"

"You've m-made three h-hundred and fifty th-thousand d-dollars on h-horse-racing?" Travers repeated.

"Yes, sir; \$350,000 in two years," Walton said again.

"And you want m-me to g-give you a p-point on st-stocks?" Travers continued.

"Yes, if you please, in return for my points on horses," Walton said.

"Well, I'll g-give you a first-rate p-point," Travers said. "You've m-made th-three h-hundred and fifty th-thousand d-dollars in t-two years. Then st-stick to your b-b-bu-

ness. It's a first-r-rate p-point."

Another story in reference to points is this: Travers wanted to do a favor for a friend, and he said to him: "If you'll c-come and see m-me in September I c-can g-give you a p-point that will m-make m-money."

Following the suggestion the friend dropped in to see Travers the latter part of the month mentioned.

"H-have you c-come for that p-point?" Travers asked.

"Of course," was the reply.

"Well, you're the luckiest d-dog I know. I p-played that p-point two w-weeks ago and lost a p-pot of m-money. You st-stick to m-me right c-close, and I'll l-land you in the p-poor-house, sure."—*New York Times*.

WOOD-POLISHING WITH CHARCOAL.

A Paris technical journal thus describes a method of polishing wood with charcoal: "All the world now knows of those articles of furniture of a dead black color, with sharp clear cut edges and a smooth surface, the wood of which has the density of ebony. Bringing them side by side with furniture rendered black by paint and varnish, the difference is so sensible that the considerable margin of price separating the two kinds explains itself. The operations are much longer and much more minute in this system of charcoal-polishing, which respects every detail of the carving, while paint and varnish would clog up the holes and widen the ridges. In the first process they employ only carefully-selected woods of a close and compact grain; they cover them with a coat of camphor dissolved in water, and almost immediately afterwards with another coat composed chiefly of sulphate of iron and nut-gall. The two compositions in blending penetrate the wood and give it an indelible tinge, and at the same time render it impervious to the attacks of insects. When these two coats are sufficiently dry, rub the surface of the wood at first with a very hard brush of couch-grass, and then with a substance as light as possible; because, if a single hard grain remained in the charcoal, this alone would scratch the surface, which on the contrary they wish to render perfectly smooth. The flat parts are rubbed with natural stick charcoal, the intended portions and crevices with powdered charcoal alternately with the stick. The workman also rubs his piece of furniture with a piece of flannel soaked in linseed oil and the essence of turpentine. This process repeated several times causes the charcoal, powder, and oil to penetrate into the wood, giving the article of furniture a beautiful color and perfect polish, and which has none of the flaws of ordinary varnish."

DEEP BREATHING.

In this season, when coughs and colds are "all the rage," any method of preventing them, and checking the first symptoms without drugs, may be of inestimable value. Therefore the following suggestions are offered.

When you find you have a cough, and before it gets to be deep-seated, go into the air and practice deep breathing. Draw air into the lungs until they are completely distended, raising the arms above the head during inspiration to more fully expand the chest.

Hold the air in the lungs for a few seconds, then breathe it out slowly. Repeat the operation a dozen times or more, and after an hour try it again.

Persistence in this treatment will often cure a newly-contracted cough in a few hours. If the cough is of long standing, pain may be felt under the shoulder-blades and across the chest during the breathing, but as this is caused by the tearing away of adhesion of the lung tissue, it will usually pass away in a day or two, and the fact that it is felt shows that the lungs need thorough inflation.

Three cases have recently come under our observation where this treatment has proved beneficial.

The first was that of a lady who had been troubled with a dry cough for several months, but whose lungs were apparently sound. In three days she cured herself entirely by deep breathing, and, although a month has gone by since then, there has been no return of the cough.

The second was a gentleman who thought his lungs were failing. Deep breathing gave severe pain as above described, but it soon passed away. A burning sensation was also felt in the lungs at each deep breath, owing to the access of oxygen to irritated lung tissue. The cough decreased in frequency and violence, he has gained in general health, and recovery will probably ensue.

The third was the editor of the *Journal of Health*. He "caught cold," which settled into a severe cough. A dozen inhalations would stop the cough for an hour or two, when it would return and be stopped again in the same way. Two days' treatment drove it away entirely.

Sometimes the first deep breath is interrupted by a cough, but after a trial or two the inclination to cough can be controlled, and after five or six breaths are taken a sense of relief is felt and the desire to cough passes away.

A physician friend informs us that he has seen many cases of supposed consumption speedily cured in this way. At all events, it can do no harm to try it, and benefit may result.—*Hall's Journal of Health*.

NOISY ENGINES.

If every pin in every connection on an engine is round, correctly fitted to its boxes, and properly adjusted to its direction of motion, the action will be silent under any speed. Assuming, now, that the valve motion is noiseless, without clicking trips, or parts striking other parts acting as trips, and that the valves are properly adjusted, there will be nothing audible from these details. The connections—including those of the valve motion—and the main bearings are the chief sources of noisy action, but these may be all right, so far as the eye can see, and the engine may still go about its work complainingly and as though it protested against it. The causes of trouble in such cases are often obscure, and not easily detected, but the causes exist, and if looked for carefully and thought over deeply, may be located. It sometime happens that an overhanging cylinder is weak in the flanges, or not properly erected, so that when the piston is at the back end of the stroke and takes steam, the whole cylinder springs up and down; enough, at all events, to cause a very decided deflection. This may induce pounding, or noise, from a very obvious reason, to-wit: destroying the alignments of parts. Even the bed-plate, massive as it appears, may spring under its load and throw everything out of truth. This is a source of trouble seldom suspected, but it is one that should be looked for. The mere appearance externally, of any part, is no guarantee that it is sufficient for the work demanded of it.

Another cause of trouble in noisy engines is foundation. That which is out of sight is assumed to be all right, for no better reason than that it is invisible; but in made ground, or by reason of bad workmanship, foundations often cause trouble. An engine in a certain shop which ran silently when the steam hammer in the adjoining shop was not at work, thumped violently when the hammer was in use. The cause here was palpable enough, and the same thing often exists in other localities with other machines. They need not necessarily be steam hammers to give trouble.

When we reflect that the best foundations extend only a few feet below ground, that they rest wholly upon a comparatively loose, friable substance—the earth—that the said foundations have to resist, year in and year out, the push and pull of thousands of horsepower, it is not at all wonderful that they should yield. Foundations settle and weave back and forth with time. The firmest set post will give eventually to power applied unintermittently in opposite directions, and so will an engine foundation unless the greatest care is taken in its construction.

Aside from the annoyance it gives, noise is a loss of power, for it is force applied in a wrong direction, and we should use every effort to suppress it.—*Mechanical Engineer*.

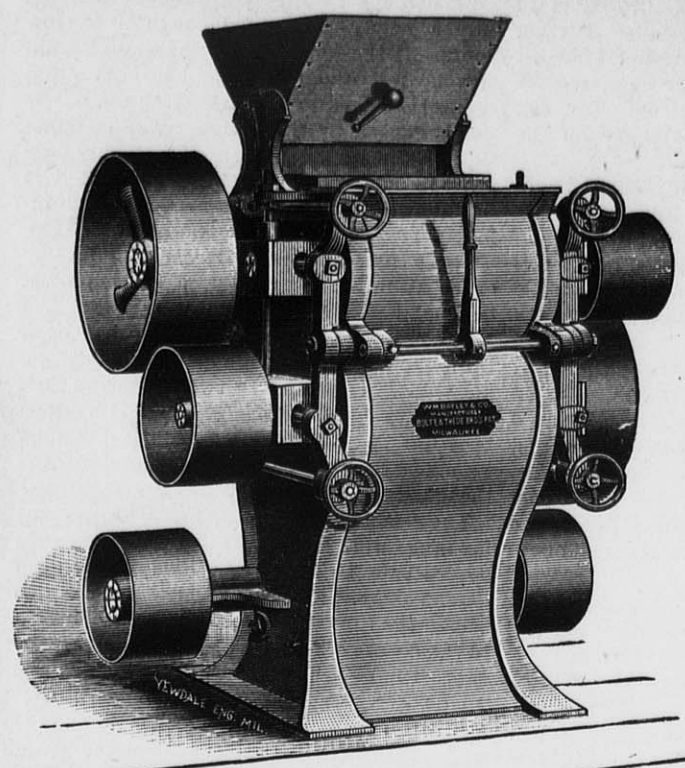
F. H. Bolte's Pat. Noiseless Belt-Drive Four High Roller Feed Mill

The only Roller Mill having Two-Reductions in one Machine, the material being operated on twice without the use of elevators. This Mill is especially designed to meet the wants of all parties for grinding

CORN, OATS, BARLEY OR RYE FOR FEED.

For this purpose it cannot be excelled. It will grind grain WET or DRY equally well, and perfectly cool and flourless. It is far better than burr stones or chilled iron discs. It takes but one-third of the power which is required to run a medium sized burr, grinding twice as much in a given time; does better work, and avoids the trouble of dressing what coarser than the bottom set and in such a manner that even grain after being soaked with water, will readily gated much finer. The Mill is provided with a Shaker for feeding the Rolls instead of feed-rolls, such as are commonly used on other Roller Mills. This is a great advantage, as it does not become clogged with bits of corn cobs, straw, or many other substances, that are generally intermixed with grain that is ground for feed or distilling purposes.

The Mill is also provided with an automatic locking device, that is operated by simply moving a hand lever, conveniently arranged in front; in case the Mill becomes clogged or runs empty, it instantly throws all the Rolls apart and prevents the belts from coming off. The Rolls are all arranged so they can be set while the machine is in motion, by an ingenious device that acts in the form of a key between the bearings of the Rolls, and regulates the fineness of the grain independently of the hand-wheels, which are only calculated to regulate the tension on the springs. The keys are all so arranged that the Rolls are kept from rubbing each other when not grinding, as we make no calculations on the stock keeping them apart. the Rolls used are superior to the ordinary Cast Iron Chilled Roll, and are better adapted for grinding feed; on account of their extreme hardness and being less brittle, they will stand the resistance of nails and other hard substances much better, the outside of the Roll being a steel shell, tempered, and of large diameter, so it presents about one-third more grinding surface than the ordinary Rolls used in flour mills. The Roll itself is of a light pattern, and something like the shape of a pulley, upon which the above named steel shell is shrunk and tempered at one operation, thereby getting the Rolls absolutely round and true. The weight, although the Rolls are much larger than the ordinary Rolls, is about one-half, which requires less power to drive them and less additional wear on the bearings. The machine is driven exclusively by belt, either from above shaft or short bolts. The frame is bolted together and has all the boxes cast solid to it, so there is no possibility of rugated to any number of corrugations per inch, and are also prepared to furnish first and second break on wheat. We respectfully invite all parties to inspect our Mills, and warrant them superior to any mills made. Address, for further particulars, prices, etc., the SOLE MANUFACTURERS,



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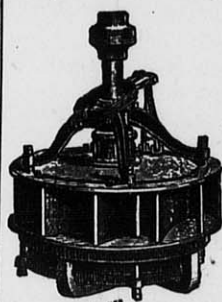
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SEED CORN TEST.

The Experimental Station at Columbus, Ohio, is doing a good work for farmers. Some of the results of experiments recently made were in substance as follows: For two years much corn used for seed has been of poor quality. Of the 580 samples tested at the station last year, an average of little more than 78 kernels in 100 germinated. Of this number those samples that had been carefully dried and fairly well-kept averaged over 93 per cent., while those that were taken from the crib averaged only a little over 63 per cent. Another fact that should be borne in mind is this: Corn that shows a high percentage of vitality in mid-winter may, unless properly cared for, be unfit for seed when planting time arrives. A sample of corn taken from the crib was tested January 20, and 73 kernels in every 100 germinated. A similar sample was taken from the same crib February 26, when only 30 kernels in 100 were found good. Another sample selected April 24 showed that only 26 in 100 would grow. Last year over 2,840 acres of corn land were planted in Ohio. Allowing four quarts of seed per acre, or one bushel for every eight acres, would give 355,000 bushels of corn used. If only a small percentage of this vast aggregate is poor, the loss is great. In order to prevent loss, the station tests, free of charge, all seeds sent for that purpose. The corn should be selected, one kernel from the middle, one from the butt, and one from the top of each 100 ears; the top, middle and butt kernels kept separate. In other states, where such stations are wanting, farmers may procure such information as will enable them to make their own tests.

WAGES IN WHEAT FLOUR MILLS.

Bradstreet's of March 14, published an exhaustive article on the subject of "Wages," showing the ratio of reduction since 1882. In reply to circulars sent out to flour mill owners, answers were received specifying amount of wages paid as follows:

MINNEAPOLIS, MINN.

Wag. per male adult, weekly—Dec. 1882, Jan. 1884, Jan. 1885, p. c.			
Millers.....day	2.50 to 3.00	2.50 to 3.00	2.50 to 3.00
Millwrights.....day	3.00	3.00	3.00
Packers.....day	2.50	2.50	2.50
Laborers.....day	1.75	1.75	1.75

The rates at Minneapolis are reported to have been the same for thirteen years.

ST. LOUIS, MO.

Head millers.....	20.00 to 25.00	20.00 to 25.00	20.00 to 25.00
Eng'rs.....	18.00 to 22.50	18.00 to 22.50	18.00 to 22.50
New hands.....	7.50 to 9.00	7.50 to 9.00	7.50 to 9.00
Skilled hands.....	12.00 to 15.00	12.00 to 15.00	12.00 to 15.00

NEW YORK CITY.

Packers.....day	2.50	2.00	2.00
Laborers.....	9.00	9.00	9.00

At New York millers' wages remain unchanged during the period covered, although corresponding with the advance in the art of milling there has been a demand for more skill.

MILWAUKEE, WIS.

Head miller.....	25.00	25.00	25.00
Second miller.....	15.00	15.00	15.00
Helpers.....	9.00 to 10.50	9.00 to 10.50	9.00 to 10.50
Other laborers.....	7.50 to 9.00	7.50 to 9.00	7.50 to 9.00

TERRE HAUTE, IND.

Millers.....	12.00	12.00	12.00
Pa. kers.....	10.00	10.00	10.00
Machin. tenders.....	10.00	10.00	10.00
Engineers.....	12.00	12.00	12.00
Laborers.....	7.50	7.50	7.50

The above figures represent the average paid by the leading millers at Terre Haute.

BROOKLYN, N. Y.

First M. ller.....	23.00 to 25.00	23.00 to 25.00	23.00 to 25.00
Second miller.....	18.00 to 19.00	18.00 to 19.00	18.00 to 19.00
Skilled labor.....	12.00 to 14.00	12.00 to 14.00	12.00 to 14.00
Ordinary.....	8.00 to 10.00	8.00 to 10.00	8.00 to 10.00
Cartmen.....	13.00	13.00	14.00
Engineers.....	18.00 to 20.00	18.00 to 20.00	18.00 to 20.00
Firmen.....	12.00	13.00	14.00

The full returns for Brooklyn milling employees may be reported also as supplementary to the New York City list given above.

ROCHESTER, N. Y.

Warehousemen.....	10.00	10.00	10.00
Millers.....	12.00	12.00	12.00
Packers.....	10.00	10.00	10.00

Occasionally an extra good man receives \$2 more per week than above noted.

EATING.

Hurried eating is a breach of good manners. Americans are proverbially fast eaters. Not the boorish and low lived, but the best people, so-called, are often guilty of this indecency. Dr. Willard Parker, in a recent lecture, gave the following bill of fare seen to be eaten in Albany by a "legislator" in three and a half minutes: Two boiled eggs, two large potatoes, a beefsteak, two goblets of milk, a plate of ham and eggs, a plate of buckwheat cakes and a large cup of coffee. The poor man, however, complained to a friend that he "didn't feel well, and was troubled with dyspepsia!" What sort of legislation can be expected from such billious creatures? Animals do better. The carrier pigeon arrives from its long flight exhausted, refuses food, taking perhaps, a little water, and settles down to rest. Then it will revive and eat. Instinct teaches it that when the nerve power is gone it can't be turned on at the stomach for digestion; the steam is too low. The proprietor of the Astor House restaurant says that, it is strange "to see the way in which these Americans go at their food. A man will start at Wall street, run all the way to the Astor as fast as his legs will carry him, and shovel in his lunch as though

his life depended on his getting through in five minutes. Then he will stand around here and talk for an hour or longer without thinking of going back to his office. I have seen them go over and converse for a solid hour with the cashier, after running through their feed like chain lightning."—*Home Science.*

DIET AND FOOD.

I. Foods are scientifically divided into—1.—Water. 2.—Meaty or albuminous substances. 3.—Starches or carbohydrates. 4. Fats. 5.—Mineral matters. 6.—Accessory foods. All of which have their representatives in the body itself. A human being is so "watery" that the corpse of a man weighing 150 pounds, and carefully dried, would come out a shriveled mass of about 50 pounds in weight. The meaty substances are represented by muscle; the starchy by glycogen found in the liver, and by a sugar (inosite) found in the muscles; fat is present, padding angular parts and giving a roundness to the frame; mineral matters abound, especially in the bones and teeth.

II. The composition of the human body is somewhat as follows:

ADULT MAN.	
Bones.....	16 per cent.
Muscles.....	42 " "
Organs in the chest and abdomen.....	9 " "
Fat and skin.....	25 " "
Brain.....	2 " "

Therefore, supposing a person weighed 150 pounds, 63 pounds would be muscle, 37½ pounds would be skin and fat, 24 pounds would be bone, and three pounds would be brain.

III. More than half the weight of the body is bone and muscle.

IV. The amount of water in food is very large. A beefsteak contains 75 per cent. of water. In buying a pound, only one-fourth of that pound is dry solid meat. Cabbages contain 85 to 90 per cent. of their weight of water, and succulent fruits sometimes more than 90 per cent. Of substances most commonly eaten, rusks or biscuits are the driest, and watermelons the most watery of foods.

V. When water is taken into the system it assists without doubt in the building up of new tissues, in the repair of old. According to this view, it is not merely a dilutant of fluids, it does not simply play an inactive part like a lubricant of machinery, but is in the truest sense a food.

VI. Life cannot be maintained on pure starch, sugar or fat for a long time; on the other hand, a purely meat diet cannot maintain life indefinitely.

VII. Sugar cannot be made the basis of diet but rice can; so that taking complex foods, rice heads the list. Of the three great foods on which, with very little addition, millions of human beings live—viz., rice, bread and potatoes—rice is nearly all assimilated, fine wheaten bread being almost equal to rice, while with potatoes there is nearly 40 per cent. of waste, or substances which pass away without being utilized. So that in point of economy, and considering the relative price of the three, rice stands first.—*American Grocer.*

The following is the latest official news concerning the area, condition and prospects of the winter wheat crop, as supplied by commissioners of agriculture in the various states:

In Virginia the acreage is fully 30 per cent. less than last year. As regards the conditions, advices from the southwest portion of the state report the wheat as being almost destroyed, and generally the prospect for wheat is worse than it has been since 1866. Alternate freezing and thaws, with no snow to protect it, is the principal cause. In Maryland the area is fully 25 per cent. short as compared with last year. There is no serious damage reported. The condition, however, is not flattering, owing to haste in sowing, and the soil not being fully prepared to receive the seed. In Missouri the area sown to wheat is 10 per cent. less than in 1884; but little damage to the plant is reported as yet. In Illinois the acreage is about 15 per cent. short of last year. Some damage, but not serious, was reported in the southern part of the state early in the season. The ground is now covered with snow, and the condition of the grain cannot be determined until the snow disappears. The acreage of Tennessee is fully 20 per cent. less than last year's, and the damage from frost is estimated at 10 per cent. In Kansas the acreage is about 30 per cent. as compared with last year. Some of the largest wheat-growing counties of the state have reduced their area from 25 to 50 per cent., owing principally to the ruling low price of wheat during the past season. The condition of the growing wheat is not up to the standard. Some sections report damage by insects in the fall, and owing to the severity of the winter many predict injury by winter killing. The acreage of Kentucky is from 10 to 15 per cent. less than that of last year, and the winter has been very unfavorable. The area is much less than the last crops in North Caro-

lina, and there is much complaint of winter killing. In New York the area is somewhat less than last season's, and the conditions are favorable, no damage having been reported. Farmers have cut down their acreage about 20 per cent. in West Virginia, and the season so far is unpromising. The fall drought in Georgia extended up to December, and restricted the wheat area. As in the other Southern States, the weather has hurt the young plant. Minnesota farmers have cut down the acreage about 10 per cent., and not more than 2,500,000 acres have been sown. In Northern Dakota not more than one-eighth and in Southern Dakota three-eighths of the crop remain in farmers' hands, and the elevators are kept well cleaned up. If prices remain low the wheat area will not be increased this spring.

THE "IF" IN THE WHEAT CROP OF INDIA.

In his circular Sam. Laughlin, of Chicago, says: Mr. Lecnard, the statistical agent of the Indian Government, issued a forecast of the Indian wheat crop for last November, wherein he estimated the acreage of 26,000,000 and the yield 7,000,000 tons, or 244,000,000 bushels, and concluded by saying that "if" they had a good "rainfall in January, they would have a "bumper crop." Now, although this report is over four months old, and was coupled with an "if," which was not realized, as their rainfall was below the average, yet every two-penny, half-penny, newspaper and would-be-authority has been bumping their little heads against that bumper crop ever since, and about twice or three times a week the old, old story is reprinted as if it was something new, until the public has become nauseated with it; but when we look at the facts and see this same bumping authority estimated the crop of last year at 299,000,000 bushels, against 244,000,000 bushels this year, showing a shrinkage of 20 per cent.; and when we consider that out of this crop of 299,000,000 the total exports from India to all countries was only 38,000,000, and of this England received less than one-half, the query to thinking men will naturally be, if England only received only about 17,000,000 bushels last year out of a crop of 299,000,000, how much is she likely to get this year out of a crop of 55,000,000 bushels short.

SPRING-FINDING IN BAVARIA.

The *Allgemeine Zeitung* gives some interesting particulars of remarkable success in indicating the presence of water springs on the part of a man named Beratz, who seems to be a recognized authority in such matters. The scene of his performances was in the Bavarian highlands, at a height of more than 1,300ft. above the level of the sea. The commune of Rothenberg, near Hirschhorn, suffered greatly from want of water, and invited Beratz last autumn to endeavour to find some source of supply for them. He inspected the locality one afternoon in presence of the public authorities and a reporter of the *Allgemeine Zeitung*, and announced that water was to be found in certain spots at depths which he stated. The first spot was in the lower village, and he gave the likely depth at between 62ft. and 72 ft., adding that the volume of water which the spring would give would be of about the diameter of an inch and a quarter. After incessant labour for four weeks, consisting mainly of rock-blasting, the workmen came on a copious spring of water at a depth of almost 67ft. What he declared about a water source for the upper village was very singular. He pointed to a spot where he said three watercourses lay perpendicularly under one another, and running in parallel courses. The first would be found at a depth of between 21ft. and 26ft., of about the size of a wheaten straw, and running in the direction from south-east to north-west. The second lay about 42ft. deep, was of about the size of a thick quill, and ran in the same direction. The third, he said, lay at a depth of about 56ft., running in the same direction, and as large as a man's little finger. The actual results were as follows:—The first watercourse was struck at a depth of 27ft., running in the direction indicated, and having a diameter of one-fifth of an inch. The workmen came on the second at a depth of 42ft.; it had a diameter of 7-25ths of an inch. The third was found at 62ft. below the surface, and having a diameter of 3-5ths of an inch—all three running in the direction Beratz had indicated. Unfortunately no hint is given of his method of procedure.

AN AWFUL NIGHT AT SEA.

The *Morning Call*, San Francisco, received the following report of a terrible storm at sea: "The bark Innerwick, Captain Waters, thirty-one days from Yokohama, has just arrived, and the master reports a very stormy passage. At midnight, on February 24th, in latitude 37° north, longitude 170° 45' east, the wind blowing heavy from the south-southeast with the ship running before it under short sail. At one o'clock in the morning it increas-

ed to a living gale with a sky of pitchy blackness. At five o'clock the captain, who was aroused by the mate, went on deck and found the sky changing to a fiery red as if the entire heavens were in conflagration. All at once a large mass of fire appeared over the vessel, completely blinding the spectators, at the time, and as it fell into the sea some fifty yards to the leeward it caused a hissing sound, heard even above the blast, causing the vessel to quiver from stem to stern. Hardly had this disappeared when the mate, clutching the captain's arm, cried: 'My God! what's that?' pointing to a towering mass of foam rapidly approaching the apparently doomed vessel. The noise from the advance of the volume of water is described as deafening. As the bark was struck flat aback, and before there was time to touch a brace, the sails filled, and the roaring white sea could be seen passing away ahead. To increase the horror of the situation another vast sheet of flame ran down the mizzen mast, from whose rigging poured myriads of sparks, and for twenty minutes the strange red of the sky remained. The master, who is an experienced mariner, declares that the awfulness of the sight was beyond description. He considers that the ship had a narrow escape from destruction."

ITEMS OF INTEREST.

BUSINESS OF THE PATENT OFFICE.—The annual report of the Commissioner of Patents for 1884 shows aggregate receipts of \$1,075,799, and expenditures \$970,580. The receipts for 1883 were 1,146,240. There is in the United States Treasury a balance on account of the patent fund of \$2,781,695. There were issued during the year 20,297 patents and designs. Of the patents issued 19,013 were to citizens of the United States and 1,284 to citizens of foreign countries. The commissioner again calls attention to the inadequacy of the rooms occupied by his office and of their utter unfitness from a sanitary point of view. He says that several deaths have already occurred from disease contracted in these foul, damp rooms. He asks that the force of examiners be largely increased, and recommends that the salary of the Assistant Commissioner be increased to \$4,000 per annum.

A LADY MACHINIST.—A young lady of 17, studying at one of our large educational institutions, is pursuing a course of study that half a century ago would have marked her as an extraordinary example of independence. She has chosen the mechanic arts, and takes shop practice, studies machinery and its necessary accompaniments of science and mathematics, and in all branches acquires herself to the satisfaction of her teacher. Her object in pursuing a calling considered usually fit only for the masculine intellect, is to enable her to assist her father in his large manufactory at Rochester. At graduation she will be an accomplished machinist, a valuable member of the firm.—*Boston Journal.*

An experienced foreman who has an eye for philosophy says that tools apparently partake of the temper of those who use them. A short-grained man generally has nicked bits; the impetuous man broken ones; the lazy man dull ones; the careless man badly dressed ones; the man of one idea one dress for all kinds of work; the soft man can rarely keep the edge of a tool from turning, while the good-natured and even-tempered man always has the best tools in the shop, and is pestered continually by ill-tempered workmen who come to borrow from him whenever they have a particular piece of work to do. It is quite interesting to note the similarity in the temper of workmen and their tools.

CHLORIDE OF METHYL AS A REMEDY FOR NEURALGIC SCIATICA.—Chloride of methyl, sprayed, produces a degree of cold represented by 23 degrees C. or 94 degrees F. M. Debove has played a jet of this cheap fluid on the skin along the whole length of the limb corresponding to the course of the sciatic nerve and its main branches, effecting almost instantaneous relief to the sufferer from neuralgic sciatica.

BAKING AND REFRIGERATING WATCHES.—A watch, to obtain the highest possible certificate, class A, especially good, from the Kew Observatory, must satisfy the conditions of a very severe ordeal lasting forty-five days, and during that time the hands must not be touched. The watch is hung up and laid down in every conceivable position, and placed in ovens at a temperature of eighty-five degrees, and in refrigerators at forty degrees Fahrenheit. Should the mean variation be more than two seconds in its daily rate during the period of the tests, the watch is either returned to its owner or an inferior certificate is awarded. The Superintendent of Kew Observatory has lately reported the noteworthy fact, as indicating the high degree of excellence to which the science of horology has arrived, that a watch not specially constructed for the purpose, and of moderate price, carried off the highest honor by not showing a mean variation of three quarters of a second in the daily rate, though tested as just stated.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.

BUILDERS FROM THE RAW MATERIAL OF

ROLLER MILLS, CENTRIFUGAL REELS,

Flour Bolts, Scalping Reels, Aspirators, Millstones, Portable Mills,

AND KEEP THE LARGEST STOCK OF

All Kinds of Mill Supplies in the United States.

140 BARREL MILL, MEMPHIS, TENN.

MESSRS. NORDYKE & MARMON CO., INDIANAPOLIS, IND.

MEMPHIS, TENN., December 16th, 1884.

Gentlemen:—Our mill, as planned and diagrammed by you, has been in steady operation for near one year past, and in proof that you have given us a successful job, we will simply say that in the face of a very dull trade, and while other mills were running on short time, we have been running full handed, in order to supply a genuine demand for our flours. We must also notice, that although you only promised us 100 bbls. capacity, we easily make 140 bbls. per day without deteriorating in grades of flours. We use No. 2 wheat, and consume 4 bushels and 28 pounds in making a barrel of flour. We make about 28 per cent. of very high patent, 68 of bakers, and 6 per cent. of low grade. Yet our mill is so constructed that we may vary the percentages to suit various markets.

We have always been victorious in the sharpest competition, and from the first day of starting we have kept the highest position among all roller mills, either located or represented in this region.

Yours truly,

G. W. COWEN & CO.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.

Gentlemen:—We have just been awarded all the first premiums on flour offered at the great Fair and Exposition. We made a clean sweep of them all, over all competitors, which includes all the mills in St. Louis, and all over the West, in fact the entries were open to the whole United States. We received 1st premium on Patent Flour, 1st premium on Straight Flour, 1st premium on Clear Flour. This embraces the entire list; the flour was made on your rolls, and you should make the fact widely known. Hurrah! for the N. & M. Co., and Anchor Milling Co.

Yours very truly,

JOHN CRANGLE, V. Prest.

NORDYKE & MARMON CO.

NOTE.—The entire reduction of the wheat and middlings is made upon our rolls in this mill.

500 BARREL MILL IN MISSOURI.

Read what an Old Miller who has thirty-four pairs of these Rolls in constant use says:

MESSRS. NORDYKE & MARMON CO., INDIANAPOLIS, IND.

OFFICE OF DAVIS & FAUCETT MILLING CO.,

ST. JOSEPH, MO., Nov. 28th, 1883.

Gentlemen:—In regard to the workings of our new mill erected by you, will say it is working fully up to and beyond our expectations. Our average work is fully 33 per cent. over your guarantee. Since starting our mill last July we have had no complaint of our flour from any market where sold. It gives universal satisfaction, and we have it scattered on the trade from Chicago to Galveston, Texas. Our yields are all that are attainable. We have tested it on both Spring and Winter wheats with satisfactory results on both varieties. Since the mill was turned over to us we have not changed a spout or a foot of cloth, nor have we found it required to make any changes. We have run as long as six days and nights without shutting steam off the engine, not having a "choke" or a belt to come off. The mill is entirely satisfactory to us, and for a fine job of workmanship, milling skill and perfection of system, we doubt if it is surpassed in the United States to-day. It is certainly a grand monument to the ability and skill of Col. C. A. Winn, your Milling Engineer and Designer. You may point to this mill with pride and say to competitors, "You may try to equal, but you will never beat it." Wishing you the success that honorable dealing deserves, I am,

Yours, etc.,

R. H. FAUCETT, Prest.

Letters on file in our office from a large number of small Roller Millers giving as favorable reports as above. A portion will be published as occasion demands.

SPECIAL MILLING DEPARTMENT!

Mill Builders and Contractors—Guarantee Results.

Motive Power and Entire Equipment of a Modern Mill Furnished under one Contract.

PRIVATE TELEGRAPHIC CIPHER.

COMPILED EXPRESSLY FOR THE USE OF

MILLERS, FLOUR AND GRAIN BROKERS,

FOR PRIVATE TELEGRAPHIC CORRESPONDENCE, EITHER FOR LAND OR CABLE LINES.

This CODE has been approved and is used by many of the best firms in this country and in Europe. It contains Flour Tables, Bran Tables, Middlings Tables, Flour Grades and Brands, Time of Shipment, Dates, Names of Places, American Currency, Sterling Quotations, Tables on Limits, etc., Drawing, Credits, etc., Selling, Buying, Orders and Offers, Consignments and Shipments on Joint Account, Miscellaneous, Market Upwards, Market Downwards, Insurance, Shipping and Freight, Shipping by Regular Lines of Steamers, Finance, Bankers' Names, Standing of Firms, Telegraphing, Advances, Commission, Stocks and Crops, Weather, Samples and Quality, Equivalent of Sacks in Barrel Quantities, Commission Tables, Interest Tables, Equivalent Flour Prices in Currency, Sterling, Francs, Guilders and Marks, Comparative Tables, Sack and Barrel Flour, Ocean Freight Rates (Comparative Table), Sailings from Seaboard (Table), Key to Sailings from Seaboard Table, Foreign Weights and Measures, etc.

We respectfully refer to the following well-known firms: S. H. Seamans (Empire Mills), Sec'y of the Millers' National Association; E. Sanderson & Co. (Phoenix Mills), Milwaukee, Wis.; Daisy Roller Mills, Milwaukee, Wis.; Nunnemacher & Co. (Star Mills), Milwaukee, Wis.; Roots & Co. (Millers), Cincinnati, O.; C. H. Seybt (Miller), Highland, Ill.; Kosmack & Co. (Flour Brokers), Glasgow, Scotland; J. F. Imbs & Co. (Millers), St. Louis, Mo.; E. Schraudenbach, Okauchee Roller Mills, Wis.; Winona Mill Co., Winona, Wis., and many others.

Name of firm ordering copies printed on title page, with cable address, etc., free of charge, making it to all intents and purposes your own Private Cable Code. State number of copies desired when writing; also style of binding preferred.

Address:

THE RIVERSIDE PRINTING CO.,

No. 124 Grand Avenue,

MILWAUKEE, WIS.

OGILVIE'S HANDY BOOK

OF USEFUL INFORMATION,

and Statistical Tables of Practical Value for Mechanics, Merchants, Editors, Lawyers, Printers, Doctors, Farmers, Lumbermen, Bankers, Bookkeepers, Politicians, and all classes of workers in every department of human effort, and containing a compilation of facts for reference on various subjects, being an epitome of matters Historical, Statistical, Biographical, Political, Geographical, and of General Interest.

None more valuable book has ever been offered containing so much information of practical value in everyday life. The following TABLE OF CONTENTS will give some idea of its value:

American Geographical Names, with their Derivation and Signification; Abbreviations in Common Use and their Signification; American History, Chronological Table of; Alphabet Deaf and Dumb; Area Population, and Debts of Principal Countries of the World; Animals, Powers of Locomotion of; Alcohol, Percentage of in various Liquors; Animals, Technicalities; Capitals, the use of; Coins of Foreign Nations; Distances and Reservoirs; Circles, Diameter, Circumference, Area; Copper, Weight of; Coins of United States, Weight of; Distances to Various Parts of the World; Food, Warmth and strength Derived from; Food Percentage of Nourishment in; Grains, Vegetables, and Fruits, Comparative Yield of; Halls, Length, in United States; Information for Run-in Men; Interest Tables; Iron Cast, Tables of; Iron Bar, Tables of; Iron Sheet, Tables of; Iron Plate, Tables of; Logs Reduced to Board Measure; Lead Pipe, Sizes and Weights; Lengths; Mountains, Highest in the World; Money, Roman; Monuments, Towers, and Structures, Height of; Measures, Scripture, Capacity of; Names Popularly Given to States, Cities, etc.; Nautical Vocabulary; Ocean, Area of; Punctuation, Marks and Rules of; Parliamentary Rules and Usages; Paper, Sizes of, etc.; Population of Principal Cities in the United States; Resolutions of the United States; Rank and Board Measure; Proof correcting, Rules of; Rivers, Lengths of; Ready Reckoner; Scripting, Simple Rules for; Seas of the World; Screws, Thread; Steel, Tables of; Substances, Various, Expansion, Heat, and Conducting Power of; Snow, Perpetual Limit of; Table of Weights and Measures; Time, Divisions of; Timber and Wood and Bark, value of; Weights and Measures, Metric system of Weights and Measures, Tables of; Wood, Comparative Weight of.

The book contains 128 pages and is handsomely bound. We guarantee perfect satisfaction in every respect. PRICE Fifty cents per copy.

We will send a copy of Ogilvie's Handy Book and the UNITED STATES MILLER for one year for One Dollar postpaid to any address in the United States or Canada. Address E. HARRISON CAWKER, Publisher UNITED STATES MILLER, Milwaukee, Wis.

Read * Testimonial.
Office of I. N. DORSEY, Marshall, O., March 12, '85.
COCKLE SEPARATOR MFG. CO.
Gentlemen:—Yours of the 6th at hand, will say your Cockle Machine is all O. K. and would be useless to think of doing without it. Before we put in your Cockle Machine, we run our wheat through a rolling screen, as many mills are doing to-day, and in order to get out part of the cockle it also took out about twenty-five bushels of small wheat, so we save about 18 to 20 bushels of wheat per week by using your machine. I do not fail to tell men this. Its merits will be better known as it speaks for itself. Yours truly,
E. FOLZ, Head Miller.

The improved KURTH PATENT

COCKLE SEPARATOR

A PERFECT & ECONOMICAL SEPARATOR

3000 IN OPERATION

ALSO BUILT WITH

RICHARDSON'S DUSTLESS OAT SEPARATOR

Beardslee's Patent Grain Cleaner.

DIFFERENT SIZES & STYLES. ADDRESS THE

COCKLE SEPARATOR MFG. CO.

MILWAUKEE WIS.

LAND & THOMPSON,

REAL ESTATE DEALERS AND

GENERAL LAND AGENCY OFFICE,

109 Sycamore St., DALLAS, TEXAS,

Will attend to the Sale, Purchase, Exchange, and Lease of Lands; Locating of Lands; Paying of Taxes, and Protection of Lands; Redemption of Lands from Tax Sales; Inspection of Lands and Perfecting of Titles; Make Investments for Capitalists, and Make Loans on Lands, and all other matters in any way connected with the General Land Office Business, in a Prompt, Reliable and Satisfactory manner.

Farm Lands, Stock Lands, MINERAL LANDS.

BUYING AND SELLING OF FARMS, RANCHES AND STOCK.

OVER ONE MILLION ACRES OF THE FINEST

Grazing and Farming Lands in Texas for Sale at Low Rates to Actual Settlers.

Buy and Sell City Property; Rent and Collect Rents; place Fire Insurance; Pay Taxes and keep Up Improvements and Conduct a General Real Estate Business in all Branches. Being personally acquainted with the Prominent Land Operators and Real Estate Men of St. Louis, Chicago, Indianapolis, Cincinnati, Baltimore and other Principal Cities, and possessing all other necessary facilities, we are enabled to take Property entrusted to us with a rare Promptness and upon such Advantageous Terms as but few Land Agents can Duplicate.

Our Terms are Liberal, as the New Era of Low Prices Demand they Should Be.

Correspondence Solicited, and References furnished on Application.

FLOUR MILLS FOR SALE.

Short advertisements will be inserted under this head for One Dollar each insertion.

- CYRUS MOORE, Green River, N. Y.—Grist-mill, store, etc.
- J. EVANS, Schaghticoke, N. Y.—4-run water power mill.
- WM. H. HENDERSON, Red Bank, N. Y.—2-run water power mill.
- WM. A. VIS, Downsville, Md.—2-run mill. J. L. STYNE, Pittsburg, Pa.—150-barrel roller mill in Ohio, price \$30,000.
- UEHLING BROS., Afton, Wis.—100-barrel roller mill. Good trade established.
- McREYNOLDS & GUNDERSON, Kenyon, Minn.—100-barrel roller mill. Steam power, good trade,—on railroad etc.
- D. M. ROWLEY, Evansville, Wis.—50-barrel water power mill, on Case System. Good trade. Owner sick.
- MOORE & JONES, Kearney, Neb.—Steam flour mill.
- Q. N. MERRILL, Marshall, Mo.—50-barrel steam mill.
- D. A. SIPE, Summer Hill, Pa.—Roller mill, water power.
- S. C. LELAND, Arnold, Neb.—2-run, water mill. Good trade.
- A. HINMAN & CO., Perry, Ill.—100-barrel new roller mill. Good trade, terms easy.
- FRANK NEWMAN, Jr., Dorr, Mich.—4-run stone and rollers. Good trade established.
- T. J. BLOOM, New Madison, O.—75-barrel roller mill, steam power. Good trade, etc.
- E. J. RAFF, Hiawatha, Ks.—A half interest in the Hiawatha steam roller mill. Capacity 75 barrels.
- JOHN KERR, Griswold, Ia.—Half interest in a new mill, all in good shape. Doing fine business now.

SITUATION * WANTED.

Short advertisements inserted under this head for 50 cents each insertion.

- HENRY SCHAEFFER, 316 Third st., Milwaukee, Wis.—Head miller.
- E. R. GUINN, Westfield, Ill.—Second miller, in roller mill.
- JAMES CASTERLINE, Painted Post, N. Y.—Experienced with both roller and stone mills.
- J. W. BEEBE, Edinboro, Pa., 12 years experience.

A. BLOEDEL,

Manufacturing

Jeweler & Diamond Setter,

Dealer in

WATCHES, CLOCKS, JEWELRY, Silver and Plated Ware.

Special Attention Given to Repairing.

No. 106 GRAND AVE.,

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MILWAUKEE, WIS.

A NEW AMERICAN REDUCTION MACHINE.**A NEW ENGINE OF WAR.**

A trial of dynamite shells, under the auspices of the Senate Military Committee, took place March 12, on the banks of the Potomac, about half way between Georgetown and Chain Bridge, Washington. The District authorities refused to permit the trials within the corporate limits of Washington, on account of the destructive consequences which were among the results of the preliminary trial a few days before at the Navy Yard. Four shots were fired with six-inch shells, carrying eleven-pound bursting charges of nitro-gelatine, which contains about ninety-five per cent of pure nitro-glycerine. The range was 1,000 yards, and the target was a perpendicular ledge of solid trap rock on the south bank of the river. The first shell struck near the eastern margin of the ledge and exploded by concussion, shattering the face of the rock for the radius of about thirty feet, and carrying away several tons of debris, which were hurled for hundreds of yards up and down the stream. The second shell struck nearly in the center of the ledge, exploding as before. It opened a cavity on the face of the ledge about twenty-five feet in diameter, and excavated a pit or crater about six feet deep. Some of the fragments of rock from this explosion were hurled half a mile, one piece, weighing nearly twelve pounds, being blown clear across the canal, and lodging near a farm-house adjoining the Georgetown reservoir. The other shots were similar in their effects.

A large concourse of people assembled to view the trial, among whom, in addition to

Crocker, Fisk & Co.,

FLOUR MANUFACTURERS.

Minneapolis, Minn., Oct. 17, '84.

MILWAUKEE DUST COLLECTOR MFG. CO.

Gentlemen:—We have been using the Prinz Dust Collector for over two (2) years on all our Purifiers and part of our Cleaning Machinery, and we are so well pleased with their work that we have ordered Collectors for our Reversing Separator and other Separators and other Grain Cleaners. We consider them far ahead of any other exhaust, even the open air blast.

Yours Truly,

CROCKER, FISK & CO.

Music for Millers, their Sisters, Consins, Aunts and Friends.**THE NATIONAL SONG FOLIO.**

The best and handsomest Song Book ever published at any price, containing 225 full size music pages, 76 complete vocal compositions, every one a gem, any two of them worth more than the price of the book, and several of them purchased from the Authors and Composers especially for this work, and never before in print.

The books are elegantly bound in seven colored, lithographed covers, most beautiful in design and execution. We do not mean patent metal or molded mud imitations of Lithography, but the finest production of the most skilled artists in the business. Do not fail to send for a copy.

PRICE IN PAPER COVERS, - - - 50c.
BY MAIL, " " " " " 63c.

THE NATIONAL PIANO FOLIO.

Published in uniform size and style with the National Song Folio, containing 226 pages of choice music for the Piano Forte, consisting of 61 unabridged and well selected Rondos, Fantasies, Themes, Transcriptions, Nocturnes, Caprices Gavottes and other new and standard compositions, bound in seven colored covers.

Remember, these are not the stale, unsaleable pieces of old foggy publishing houses, but the very best selections, printed from new plates, many of them made especially for this book.

Be sure and order The "National Piano Folio."

PRICE IN HANDSOME CLOTH BINDING, - \$1.00
BY MAIL " " " " " 1.20

Or, either one of the above books BOUND IN PAPER, and a copy of the UNITED STATES MILLER for \$1.25, or the CLOTH BINDING for \$1.70. Address all orders to E. HARRISON CAWKER, publisher UNITED STATES MILLER, Milwaukee, Wis.

several officers of the army and navy, were the military and naval attaches of the German, French and Italian legations; and the Russian minister in person. The trial was regarded as a success in every respect, and was a conclusive proof of the destructive powers of the six-inch shells. The next test in the series will be made in a few days with eight-inch shells carrying thirty-five pound charges of nitro-gelatine. It is possible that, in view of the effects of the six-inch shells carrying only eleven-pound charges, the local authorities may refuse permission to fire thirty-five-pound charges anywhere in the vicinity. If so the next trial will have to be made at Fortress Monroe or Sandy Hook. According to the Herald's correspondent, the members of the foreign legations present manifested great interest in the trial, particularly the Russian minister and the German military attaché, who took copious notes of the proceedings. Some of the military and naval experts present expressed the opinion that any one of the shells fired would have completely wrecked any unarmed ship afloat, and seriously racked the strongest iron-clad. The safety of the system of firing seems to be assured by the two trials that have been made, the shell leaving the gun in every instance as safely as an ordinary powder charge shell could do.

THE extension of our railway system towards and into Mexico has been one of the most remarkable developments of recent years. A paper, "Along the Rio Grande," by Mr. Sylvester Baxter, which is to appear in the April Harper's, will give an entertaining sketch of that country before and during the making of the railway there, and many illustrations by W. L. Metcalf will add to its interest.

NEWS.

- P. N. Goetz will build a new mill at Corning, Ark.
- S. S. Savaze & Co. will build a flour and hominy mill at Ashland, Ky.
- James Turnbull is now sole owner of the mill at Detroit, Minn.
- Watson & Bradley are building a 100-barrel mill at Tacoma, Oreg.
- L. F. Shute, of Cheney, W. T., has purchased Geo-Cole's mill at that place.
- DeMontmollin & Goodson is the name of a new flour mill firm at Palatka, Fla.
- Fugna, Harris & Co. have started up their new roller mill at Trezevant, Tenn.
- D. M. Kereher, miller at Dennison City, Man., has moved to British Columbia.
- The Camp Spring Mills, St. Louis, is putting in a 400 horse-power engine.
- McDonald & McDougald, millers at Gladstone, Man., have dissolved partnership.
- The capacity of the Victor Mill at La Crosse will be increased to 550 barrels per day.
- The Portage La Prairie (Man.) Oatmeal Mill has shut down on account of scarcity of water.
- An enterprising Dakota farmer, near Fargo managed to sow ten acres of wheat, Feb. 26.

The Todd & Stanley mill furnishing Co., St. Louis, Mo., are out with a new and improved roller-mill.

The Hoople mill, at Sauk Centre, Dak., which was damaged by fire will be immediately put in order for work.

The Ogilvie Milling Co. discontinued grain buying and running their elevator at Meredosia, Man., March 31.

The Minneapolis Union Elevator Co. has commenced the erection of an elevator to have a capacity of 1,500,000 bushels.

A hominy mill is being erected for Daniel Gilkey, of Nashville, Tenn., by Nordyke & Marmon Co., of Indianapolis, Ind.

Piper, Gibbs & Co. are making arrangements to rebuild their mill at Pipersville, Wis. It will be a complete roller mill.

Kirk & Fender of Minneapolis, have recently had orders for scourers and dust collectors from the Argentine Republic, S. A.

The mill owned by C. T. Banks & Co., near Wabash, Ind., burned recently. Loss at about \$20,000; insurance \$10,000. Mill will be rebuilt.

BURNED—March 30th, Walker's mill at Empire, Ill., (loss \$3,000), and Weigner & Weigner's mill and elevator near Kahoka, Mo., (loss \$7,000); no insurance.

M. P. Bewley, of Fort Worth Texas, has contracted with Nordyke & Marmon Co., Indianapolis, to remodel his mill to the full roller process of 100 barrels capacity.

Jos. Kammerer, of Kammerer, Pa., has contracted with Nordyke & Marmon Co., of Indianapolis, to remodel his mill to the roller system, and to make 50 barrels of flour daily.

David Welshimer, of Greenfield, Ohio, has ordered of Nordyke & Marmon Co., of Indianapolis, the necessary machinery to remodel his buhr mill to a 50-barrels roller mill.

O. P. Logan & Co., of La Fontaine, Ind., are remodeling their buhr mill to the roller system, and are using rolls and machinery made by Nordyke & Marmon Co., of Indianapolis, Ind.

B. P. Hollett & Co., of Arcadia, Ind., are building a combined stone and roller mill of 50 barrels capacity, and their order was placed with Nordyke & Marmon Co., of Indianapolis, Ind.

The City Mill at Anoka, Minn., owned by John Dunn & Co., burned March 4. Loss on mill and stock about \$17,000. Insurance \$10,000. The mill was a 100-barrel one, and driven by steam power. It will be rebuilt at once.

Fred. Heitman, of Atlantic, Iowa, and Kuhn & Roush, of Manning, have both contracted with Nordyke & Marmon Co., of Indianapolis, for the necessary machinery to remodel their mill to the roller system.

Jacob H. Landes, of Yerkes, Pa., has recently started up his mill on the roller system, using a Gilbert combined four-break machine, and the necessary smooth rolls. It has a capacity of 60 barrels, and is doing A1 work.

McCall & Clark, of Montrose, Col., who built a combined stone and roller mill a few years ago, are now changing it to the full roller process, using machinery made by Nordyke & Marmon Co., of Indianapolis, Ind.

J. W. & A. W. Smith, of Clókey, Penn. (near Pittsburg), are building a 50-barrels roller mill, using Nordyke & Marmon's machinery. The motive power will be an automatic engine, and the machinery will be located by John Call.

J. & B. Stevenson, of Glasgow, Scotland, will immediately erect in London, England, at Battersea, one of the largest bakeries in the U. K. The Stevensons now consume more American patents than any other firm in Glasgow. The new bakery will be built on the most modern principles, and will consume annually a great quantity of American flour.

THE Milwaukee, Lake Shore & Western

RAILWAY,

THE BEST LINE BETWEEN Milwaukee, Sheboygan, Manitowoc, Appleton, New London and Wausau

2 DAILY THROUGH TRAINS 2 EACH WAY.

Sleeping Cars on all night Trains.

Double Berth 75 cents to \$1.00.

THE BEST ROUTE

From Oshkosh and Appleton to all Points North and Northwest via New London Junction.

The fishing resorts on the Northern extension of the Line offer unsurpassed inducements to sportsmen. Special excursion rates for parties. Guide Book entitled "Forests, Streams and Lakes of Northern Wisconsin and Michigan" forwarded to any address on application to the undersigned after March 1st, 1884.

H. G. H. REED, H. F. WHITCOMB,
Gen'l Sup't. Gen'l Pass. Agent.

Corner East Water & Mason Street,
MILWAUKEE, WIS.

An elegant selection of popular and fashionable PARLOR DANCES.

Peculiarly adapted for the use of SOCIAL HOME PARTIES.

Consisting of Quadrilles, Lancers, Galops, Polkas, Waltzes, Contra and Fancy Dances etc. etc.; a splendid collection of the latest approved compositions, together with the old favorite Reels, Hornpipes, Jigs, etc., "Money Musk," "Devil's Dream," "The Tempest," "Cicilian Circle," and others, with call for the different figures.

Printed and bound in same style and size as the National Song and National Piano Folio.

The Merrill & Houston Iron Works, Limited, of Beloit, Wis., have been reorganized with the following officers: President, J. D. Rexford, of Janesville; F. H. Starkweather, Secretary and Treasurer, Beloit. The works will now, probably, start up soon.

Close upon the completion of the 75-barrels roller mill of Todd, Hosford & McDaniels, at Eugene, Ind., comes the news of another 75-barrels roller mill, to be built in the same town by Bowers & Lash. Both contracts are in possession of Nordyke & Marmon Co., of Indianapolis, Ind.

A party with means is wanted to go to Raymond, Rice Co., Kas., to build a water power flour mill. The right of way for head and tail race will be given, together with land for mill house. Head race will be 1 1/2 mile long, tail race twenty rods. Head twelve feet of water from Arkansas River. No dam required. Apply to A. Willard, Raymond, Kas.

The 200-barrels roller mill just built for Governor Eaton, of Eaton, Col., by Nordyke & Marmon Co., of Indianapolis, was recently started up, with perfect success, and will at once convert 250,000 bushels of wheat into flour for the local trade, which has been collected during the construction of the mill. The Governor's land possessions will raise sufficient wheat to keep the mill running.

General Bidwell, of Chico, Cal., who has just contracted with Nordyke & Marmon Co., of Indianapolis, Ind., for a 200-barrels roller mill, operates a farm containing 23,000 acres, upon which is raised wheat, barley, corn, oranges, lemons, peaches, raisins, apricots, olives, etc. He was also Senator from his State at Washington. Prior to the discovery of gold he was clerk in the employ of Sutter, upon whose land gold was first discovered in 1849. Senator Bidwell purchased his present possessions of an old Spaniard, giving in pay therefor a broncho and saddle.

THE LARGE RAIL-MILL ENGINE.—Messrs. Edward P. Allis & Co., of Milwaukee, Wis., have in course of construction a 2,000-horse-power automatic engine for the Joliet Steel Company. It is to be of the Reynolds pattern, but of special design, and adapted for driving the finishing rolls in the steel-rail mill. The cylinder is 40 inches in diameter, with 5 feet stroke, and the engine is intended to run 110 revolutions per minute, giving the extraordinary piston speed of 1,100 feet. The design and construction will be of the most substantial character, the engine weighing complete over 100 tons. The engine will occupy a space of 40 x 18 feet, including that occupied by the fly-wheel and outer pillow block; the massive trunk-bed is so disposed that the working strains are thrown into the line of greatest resistance, which is, of course, a very important feature in an engine liable to vary its power from the mere friction of the roll-train to the full 2,000-horse-power. The induction and cut-off valves are of the piston type and of peculiar design. They are very free and effective in admission, cut-off, and release of steam, and are so devised that the range of cut-off will extend from the beginning to about 3/4 of the stroke; the automatic regulation being sufficiently positive and prompt to adjust the cut-off to any point in the range within a single revolution of the engine. The piston-rods will be two in number, of steel, and each 5 inches in diameter; the connecting-rod will be 14 feet between centers; and the crank-pin, of steel, will be 10x10 inches. The main shaft is to be of hammered wrought iron, made from selected scrap, 14 feet long and 20 inches in diameter, and the main journals are to be 17 inches in diameter and 36 inches long. The outer end of the main shaft will couple direct to the roll train. The fly-wheel will be 22 feet in diameter and weigh 50 tons, and when this wheel is brought up to a speed of 110 revolutions per minute, the resistance required to bring it to rest with anything like suddenness is enormous. The foundations of the engine will be very deep and massive, the engine being secured in place by twenty anchor bolts 3 inches in diameter. When the monster is set in position and put down to hard work it will be one of the triumphs of mechanical skill.

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& Co., Lawrence, Ks., two pairs rolls etc., Shelton & Jordan, Triune, Tenn., 10 pairs rolls and machinery for complete mill on the Case system; J. C. Scott & Co., New Waterford, O., a No. 1 double Case purifier; Frank Gardner, Moscow, Mo., 2 sets Case rolls with patent feed; L. Strong & Co., Omaha, Neb., have ordered a full line of machinery for a complete mill on the Case system, for Humphrey & Bird, Minden, Neb.; J. E. Bisere, Millington, Md., has ordered machinery for a complete mill on the Case system; T. J. Morris, Bowling Green, Ky., have ordered 2 sets Case rolls with patent feeder; rolls etc., have been ordered by H. C. Williams, Ithaca, N. Y., for B. F. Starr, Baltimore, Md., etc. Business is very brisk at the Case Works, Columbus, O., and domestic and foreign orders come in lively.

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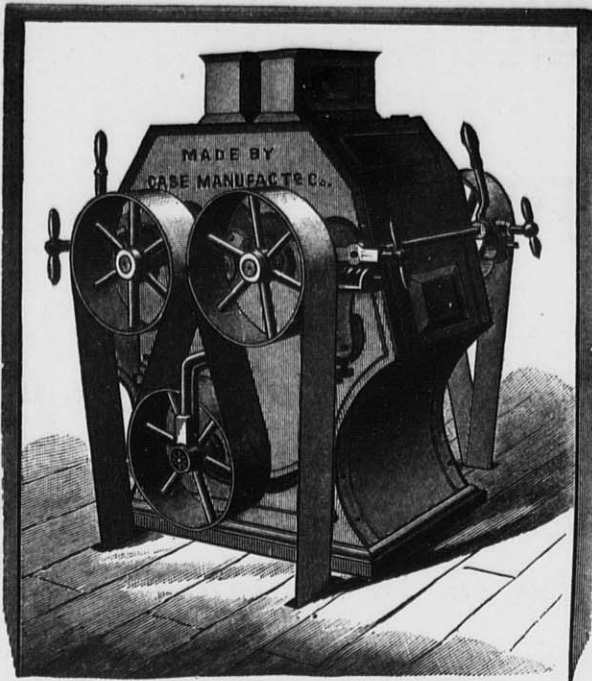
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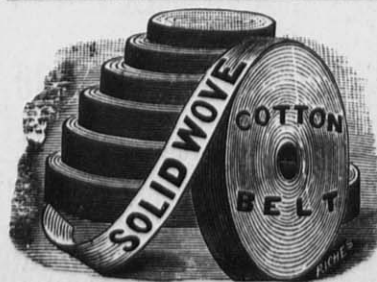
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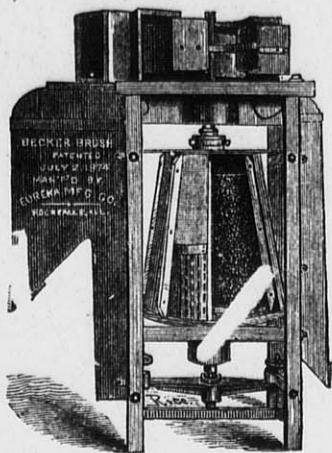
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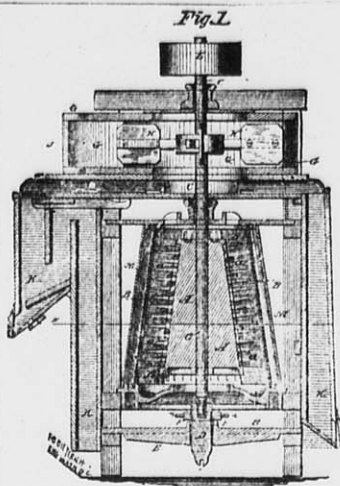
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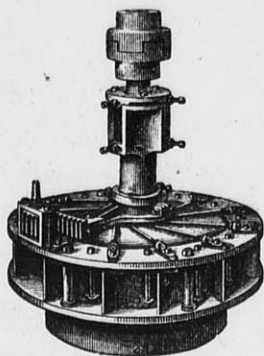
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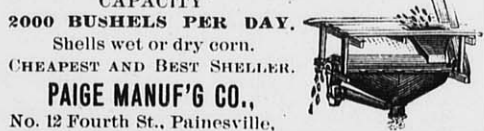
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It has been practically demonstrated that a scale one-sixteenth of an inch thick on a Boiler will require twenty per cent. more fuel than a clean Boiler, while a scale one-fourth of an inch thick will require sixty per cent. more fuel. The scale is a non-conductor of heat, and its formation in Boilers is general through the United States, more especially in the lime and alkali districts, and enough attention has not been paid to keeping Boilers free from accumulations. The cost of fuel for steam purposes is an important item, and any system for economy in this direction should receive due consideration. I am manufacturing a BOILER PURGE which I claim is the best made: First.—That it will remove the scale from any Boiler, and, by its continued use, will keep it from forming. Second.—That it will not injure the Boiler, Valves or Cylinder, nor foam the water, nor injure the water for drinking purposes. It is easy to use, being in a liquid form, it can be put directly into the Boiler, through the Safety Valve, Whistle Valve, or by Force Pump, or into the Tank. Third.—That by its use, from fifteen to twenty per cent. can be saved in the cost of fuel, besides the expense of putting in new flues every one or two years.

We also refer with pleasure to the following who are using our BOILER PURGER: C. A. Pillsbury & Co., Minneapolis, Minn.; Bassett, Hunting & Co., McGregor, Iowa; Milwaukee, Lake Shore & Western Railway; The J. I. Case Threshing Machine Co., Racine, Wis.; Racine Hardware Mfg. Co., Racine, Wis.; Janesville Machine Co., Janesville, Wis.; and all Engineers running out of Milwaukee on C. M. & St. P. R'y.; Lafin & Rand Powder Co., Platteville, Wis.; Edw. P. Allis & Co., Milwaukee, Wis.; Wisconsin Central R. R. Co., Milwaukee, Wis.; Cramer, Aikens & Cramer, Milwaukee, Wis.; V. Blatz Brewery, Milwaukee, Wis.; Ph. Best Brewing Co., Milwaukee, Wis.; Northern Hospital of Insane, Winnebago, Wis.; and many others. Address, for prices, etc., H. P. GRAVES, 43 Virginia St., Milwaukee, Wis.

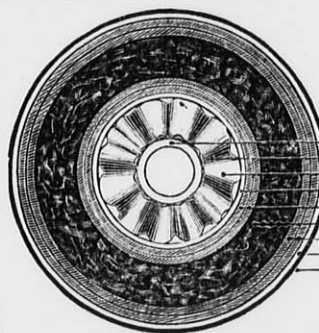
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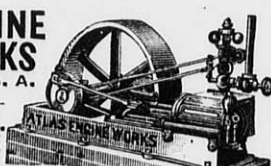
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Alcott's Improved Turbine.

This Wheel is considered one of the most correct that has been devised, gives the highest results, and, with late improvements, is now the best, most practical, and efficient Partial Gate Wheel in existence.

For Economy, Strength, Simplicity, Durability, and Tightness of Gate, it has no equal.

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POOLE & HUNT'S
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Made of best material and in best style of workmanship.

Machine Molded Mill Gearing

From 1 to 20 feet diameter, of any desired face or pitch, molded by our own SPECIAL MACHINERY. Shafing, Pulleys, and Hangers, of the latest and most improved designs.

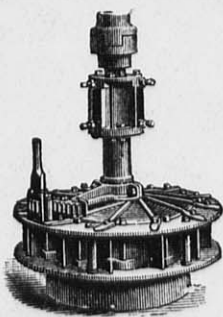
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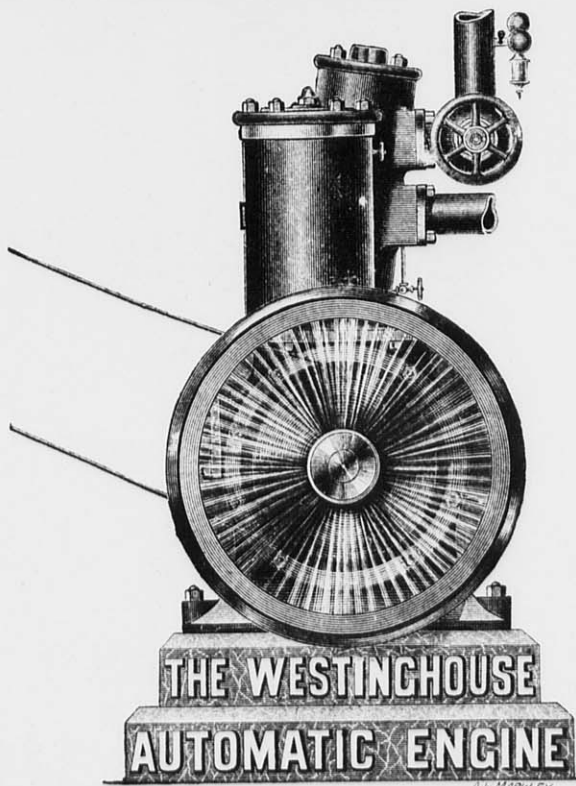
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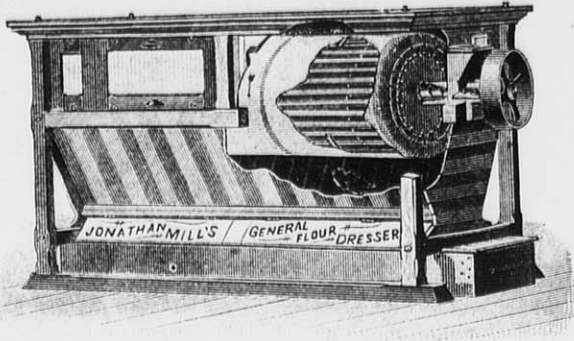
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FOR CLEAR, CLEAN BOLTING OR RE-BOLTING OF ALL GRADES OF FLOUR.

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SLOW SPEED. OCCUPIES SMALL SPACE, AND HAS IMMENSE CAPACITY.

For Price List, Sizes and Dimensions, send to

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Send also for 150 Page Catalogue Describing their Engine.

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"A LARGE NEW SUCCESS!"

EXTRACTS FROM A LETTER OF

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AGENT AT HAMBURG, GERMANY.

".....Have in the latest days been twice in the mill of Mr. Gabbert here, (which is built by.....with rollers and disintegrators) and with the intention to know the opinion of Mr. Gabbert about the Geo. T. Smith reel, who, as he told me, gave the best testimonial, and said to.....that if he had not yet.....reels, no other than the SMITH REELS would be put in his mill, and that he is now sifting the whole flour produced by his mill through the No. 0 Reel, about 2,000 pounds per hour.....shooked their heads and replied that it seems advised to wait for the result after some longer time, but Mr. Gabbert as he has now the No. 0 reel for two months answered that they might be convinced of the GEO. T. SMITH CO.'S REEL to be in fact A LARGE NEW SUCCESS. Not less than three reels of(Price \$300 each, 550 mm. diameter) would be required to do the work of No. 0 Geo. T. Smith reel for flour producing."

Hamburg, Germany, Jan. 24, 1885.

The GIBLIN SELF-ACTING FIRE EXTINGUISHER

GENERAL OFFICE AND WORKS AT

206 and 208 West Water St.,

MILWAUKEE, WISCONSIN.

THE GIBLIN SELF-ACTING FIRE EXTINGUISHER.

The most Perfect Extinguisher ever brought before the Public.

The severe public trial in the city of Milwaukee, March 10th, 1885, has demonstrated the following points wherein the "GIBLIN" excels all other Fire Extinguishers:

- 1.—It is the only Fire Extinguisher that will control large fires.
- 2.—It is automatic—acts *instantaneously*—and requires no expert to use it.
- 3.—It has 100 times the extinguishing power of any other Fire Extinguisher.



- 4.—It endures extremes of temperature without loss or injury.
- 5.—It is 100 per cent. cheaper than any other Fire Extinguisher.
- 6.—It is harmless to everything, excepting fire.
- 7.—It will not evaporate or lose any strength, even if left uncorked.
- 8.—The compound used liberates gas in larger volume and more rapidly than any other known chemical compound.
- 9.—All other Chemical Fire Extinguishers use Carbonic Acid Gas, put up under pressure. For this reason, if kept for any length of time, the gas escapes and the Extinguisher becomes worthless. *We do not use Carbonic Acid Gas;* our Extinguishers are not put up under pressure, and therefore do not lose gas by standing for any length of time.
- 10.—Mayor Wallber, Chief Foley, of the Fire Department, and the business men of Milwaukee pronounce the "GIBLIN" the most perfect and reliable Extinguisher they have ever seen tested.

What Chief Foley and the Daily Press say of the "Giblin."

HEADQUARTERS FIRE DEPARTMENT,
CITY OF MILWAUKEE.

Office of Chief Engineer, Milwaukee, March 11th, 1885.

GIBLIN SELF-ACTING FIRE EXTINGUISHER CO.,
206 West Water St., Milwaukee, Wis.

GENTLEMEN:—After witnessing the severe test of your Fire Extinguisher, on the 10th inst., and having made a careful study of the principle and construction of the same, I unhesitatingly pronounce your Extinguisher the most practical, reliable and valuable Extinguisher I ever saw, and am fully convinced that it is the only Fire Extinguisher capable of controlling large fires, and ought to be adopted by all property owners, as I am confident they will be the means of avoiding many disastrous fires.

Respectfully yours,

JAMES FOLEY, Chief Fire Department.

From the MILWAUKEE SENTINEL, March 11th, 1885:

An interesting trial of the Giblin Self-Acting Fire Extinguisher was made in Market Square yesterday in the presence of a great crowd of spectators. Two temporary wooden buildings, the larger one being about fifteen feet by twelve in size, and one story in height, were erected for the purpose. Within the surface of the wood was smeared with pitch; combustibles besides were heaped against the walls inside, and the whole copiously "wet down" with kerosene. An aperture about three feet square was left in the roof to give a good draft. When the fire was started within it quickly created a roaring flame, which soon leaped high in the air above the roof, while tongues of flames issued through the crevices between the siding, under the coercion of the vigorous northeast wind. The fire was allowed time to get a good hold of the wooden structure, and then, one after another, a half dozen bottles of the Extinguisher were thrown into the flames, each signaling its arrival in place by a slight detonation, with the result that in a few seconds the raging combustion drooped and expired, while the crowd signified its satisfaction with loud demonstrations of applause. The test was regarded as a complete success, and a demonstration that the Giblin Extinguisher will prove a most valuable agent for the sudden suppression of fires when they break out within buildings. It is gratifying to learn that the Giblin Company have decided to erect works near the city for the manufacture of their valuable invention, thus adding a new industry for Milwaukee.

From the CHICAGO TIMES, March 11, 1885:

TEST OF THE GIBLIN SELF-ACTING FIRE EXTINGUISHER.

A BRILLIANT RESULT.

MILWAUKEE, March 10—[Special.] The long expected test of the Giblin Self-Acting Fire Extinguisher came off to-day in the presence of Mayor Wallber, Chief Foley, and the Fire Committee. Several thousand persons had assembled to witness this exhibit; all being anxious to see the results obtained by this wonderful Extinguisher. The arrangements for one of the most severe tests ever witnessed were of a most complete nature.

Two wooden houses had been erected to experiment on, the larger of the two being 14 feet in width, 12 feet in height, and having a depth of 16 feet; the smaller structure being 10x12 feet. The latter was ignited first, the whole of the interior having previously filled with combustible matter, such as coal oil, tar, pitch, etc., etc. When the flames had been allowed to take a thorough hold on the building, Mr. Zinn, the treasurer of the company, dropped seven of the quart bottles into the fire; the effect was simply marvelous, calling forth prolonged cheers from an admiring and satisfied crowd. The extinguishing of the flames from the moment that Chief Foley gave the word occupied about twenty seconds. On Chief Foley being approached by the writer he expressed himself as being highly satisfied with the results. The larger structure had been designed with a view of showing the operation of the Giblin Fire Extinguisher in large packages. Eight vessels, each containing half a gallon of the chemical, were used, and they demonstrated thoroughly everything that the proprietors claimed for them. This fire was extinguished in seventeen seconds. The Giblin Fire Extinguisher is the only thing of the kind in the market that has proved itself able to cope with intense fires. The chemical can be put up in any form or shape, and for the present the company will continue to put it up in quarts and half gallons. Several valuable improvements have been made by the company during the last two months, the strength of the Extinguisher having been increased to fully 200 per cent. The Giblin Fire Extinguisher has, amongst its many advantages, one that commends itself to every householder and business man—that is, that it is entirely self-acting. The instant it comes in contact with even a spark, it scatters its contents and does its work, while other grenades have proved utterly useless by not breaking at the proper time. These severe tests have ranked the Giblin Fire Extinguisher as first in the world of any known hand fire extinguishing invention. The company's factories, formerly at Sheboygan, have been transferred to this city, their offices being at Nos. 206 and 208 West Water Street, and there is no doubt that this company has a brilliant future before it.

We have also a large number of other testimonials, too numerous to mention here.

Active and Reliable Agents wanted in every section of the Country.

[Please mention the UNITED STATES MILLER when you write to us.]